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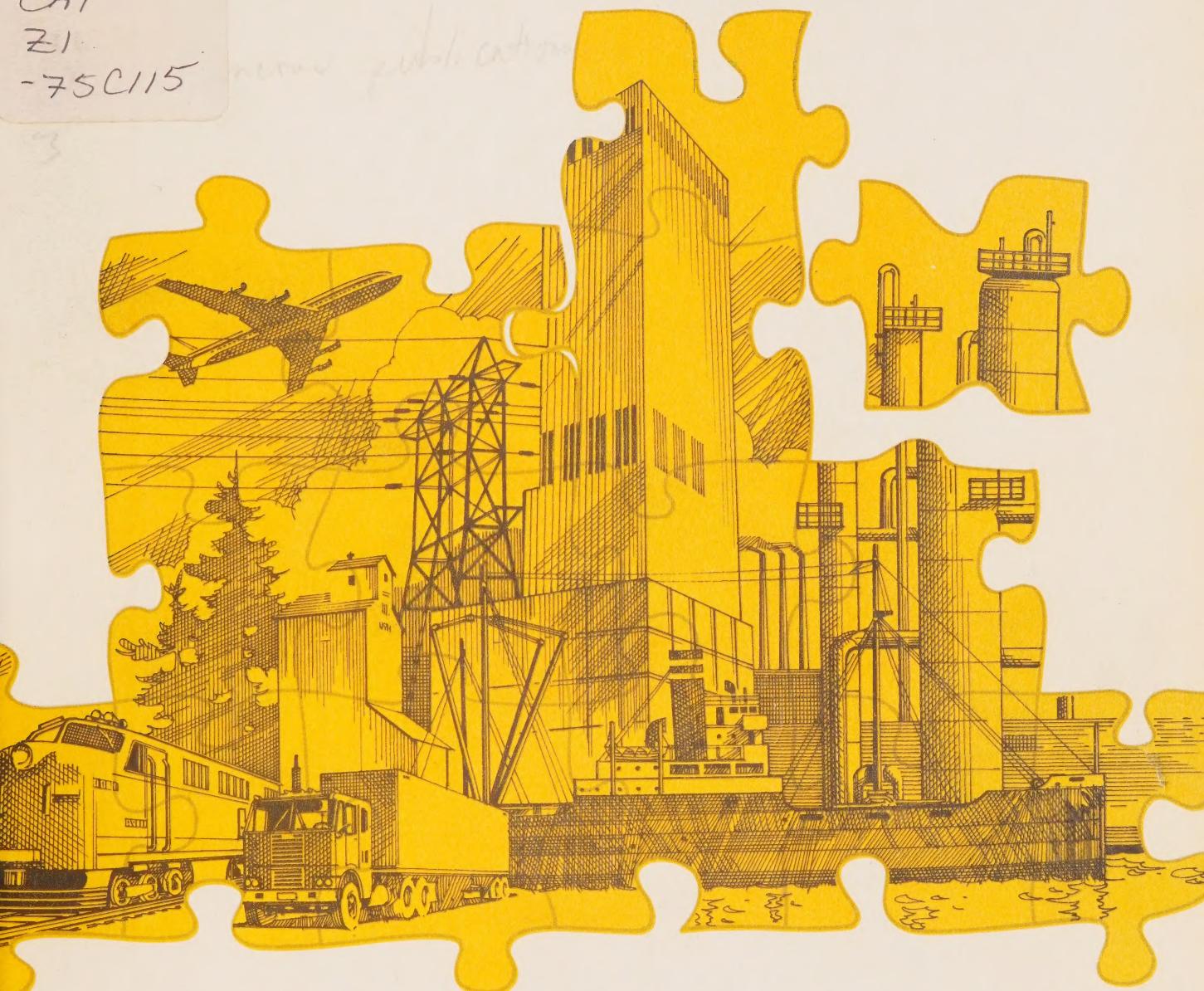


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Royal Commission on Corporate Concentration

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STUDY NO. 15

The Existence and Exercise of Corporate Power

A Case Study

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Royal Commission on Corporate Concentration

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Study No. 15

The Existence and Exercise of Corporate Power

A Case Study of
MacMillan Bloedel Ltd.

by

R. Schwindt

Simon Fraser University

March 1977



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FOREWORD

In April 1975, the Royal Commission on Corporate Concentration was appointed to "inquire into, report upon, and make recommendations concerning:

- (a) the nature and role of major concentrations of corporate power in Canada;
- (b) the economic and social implications for the public interest of such concentrations; and
- (c) whether safeguards exist or may be required to protect the public interest in the presence of such concentrations".

To gather informed opinion, the Commission invited briefs from interested persons and organizations and held hearings across Canada beginning in November 1975. In addition, the Commission organized a number of research projects relevant to its inquiry.

One such project resulted in a series of case studies, of which this is one, dealing with the history and economic and social impacts of large and diversified corporations in Canada. This study traces the growth of MacMillan Bloedel from a lumber agency to a multi-plant, multi-product enterprise, and its impact upon the social, cultural and political environment. The author uses the conventional industrial organization economics paradigm of structure--conduct--performance in his analysis. This is a well accepted approach to the study of an individual enterprise, although as the Commission indicates in its final report, there are a number of shortcomings and problems when such an approach is applied to layer economic sectors.

The study was prepared by Richard W. Schwindt of Simon Fraser University, with assistance in its early stages from William Wood of the University of British Columbia. Professor Schwindt teaches in the areas of industrial organization and competition policy, and has published articles on bank regulations, and on structure and competition in the Canadian financial sector.

The Commission is publishing this and other background studies in the public interest. We emphasize, however, that the analyses presented and conclusions reached are those of the author, and do not necessarily reflect the views of the Commission or its staff.

Donald N. Thompson
Director of Research

PREFACE

In acknowledging assistance with this project the personnel of MacMillan Bloedel must be singled out for special mention. They agreed to cooperate with this study and cooperate they did. Especially helpful was Mr. David Parker of the Strategic Planning Group, who was called upon to find answers to innumerable questions, arranged and attended a score of interviews, doffed business attire to accompany this researcher on a tour of logging operations in the wilds of British Columbia, and presented the firm's position with intelligence and candor. Also the patience of Mr. Grant Ainscough deserves mention. It was tested on many occasions and was never found wanting.

I am also indebted to my research associate Mr. Timothy McDaniels who researched and wrote the first draft of the first four sections of Chapter 3. Ms. Kate Braid researched and wrote the first draft of the fifth section of Chapter 3. Professor W. Wood researched portions of the last section of Chapter 1. Ms. Charmaine Klassen and Mr. James Brookes provided able research assistance. Ms. Susan Underwood and Ms. Donna Wilson, confronted with unintelligible script and creative spelling, were able to produce a readable manuscript. Mr. G. Bowden provided access to data collected for the Pearse Commission, explained the intricacies of the British Columbia forest tenure systems, and made a number of helpful comments which have been integrated into this report. Professor Paul Gorecki, Professor David Haley, Mr. Richard Yates, and Dr. Erwin Dreessen had the patience to read the entire manuscript and to make comments and corrections.

Remaining errors of omission and commission are mine.

R. Schwindt

NOTES TO THE READER

A. ABBREVIATIONS

ccf or cunit	one hundred cubic feet
fbm	Foot board measure
FML	Forest Management Licence (subsequently TFL)
M	one thousand
MM	one million
MOS	minimum optimal scale
neg.	negligible
PSYU	Public Sustained Yield Unit
Tons	short tons, 2,000 lbs.
TFL	Tree Farm Licence
TSHL	Timber Sale Harvesting Licence

B. ROUNDING

Percentages in tables may not sum to 100 due to rounding.

C. For conversions it is assumed that pulp mills and paper mills operate 355 days per year.

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It will be a sorry day for the Eastern Division or elsewhere in British Columbia when forest industry here consists chiefly of a very few big companies, holding most of the good timber---or pretty nearly all of it---and good growing sites to the disadvantage and early extermination of the most hard working, virile, versatile, and ingenious element of our population, the independent market logger and the small mill man.....

Our forest industry is healthier if it consists of as many independent units as can be supported.

H.R. MacMillan
November 3, 1955

CHAPTER I

THE ISSUES AND THE SETTING

INTRODUCTION

Power, whether based in economics, politics, or elsewhere, has always enjoyed considerable public interest. Rarely a season goes by without some journalistic exposé of who-controls-what making the national best sellers' list. North American society has long considered those in whom power resides as quasi-celebrities and has treated them in the media accordingly. As of late, however, large corporations in North America have been the objects of increased public scrutiny and hostility. At least four factors lie behind this general growth of public suspicion.

First, there was the very real merger wave of the late 1960's which peaked in both the United States and Canada in 1969. The activities of men like James Ling, Harold Geneen, Paul Desmarais, and Tex Thornton were followed avidly by both the business community and the public at large. From the vantage point of 1976, it is easy to understand how many of the analysts of the time (and there was an abundance of academic economists amongst them) could extrapolate from the merger trend and conclude that within so many years the North American economies would in effect be controlled by a handful of super-corporations. That the movement was broken by the vagaries of the stock market and the resistance of established power centres which resented the encroachment upon their preserves was not enough to assuage public fears.

Secondly, the commodity shortages of the early 1970's have come to be blamed, at least in part, upon the manipulation of those corporations entrusted with the providence of those commodities. For example, while the producer's cartel was initially held responsible for shortages of petroleum, the major refiners came to be accused of both exacerbating and profiting from the situation. Regardless of whether the charges are substantiated, they have been voiced and consequently add to the public's uneasiness toward corporate power.

The inordinately high rates of inflation over the past decade have also added to the hostility toward big business. The traditional explanation of inflation, that of too many dollars chasing too few goods, has given ground to the administered pricing doctrine which contends that institutions enjoying market power can raise prices in defiance of the forces of supply and demand. That governments favour this latter explanation is unsurprising when one recognizes that the traditional theory ties inflation to overexpansion of the money supply, a governmental responsibility. Again, it does not matter that few students of the administered pricing doctrine would claim it as the sole or even dominant cause of inflation. That the charge has been raised, and popularized, is enough to add to public suspicion.

Finally, the upsurge in disclosure of corporate crime has helped diminish society's confidence in the holders of corporate power. While there is no

way to know if corporate crime is actually on the rise, its exposure certainly is. The Watergate Hearings, the I.T.T. investigations, the dredging scandals in eastern Canada, and now the surfacing of high level bribery in the aeronautics industry have all understandably marshalled public opinion against big business.

British Columbia has of course been subject to these same forces, and has in fact been witness to several others. During the tenure of the N.D.P. from 1972-75, friction between government and corporate enterprise in the province increased with a resultant generation of information and heightened public awareness of the role of large firms. This friction is of special interest to this study as one of its consequences was a detailed investigation of the forestry sector carried out by the Task Force on Crown Timber Disposal, and subsequently the Royal Commission (Pearse Commission) on Forest Resources. The hearings and findings of the Pearse Commission yielded substantial information about the firms, and the allocation of resources in the sector, that had hitherto been unavailable.

And finally the subject of this study, MacMillan Bloedel, Ltd., was the object of considerable, though not negative, public interest as a result of two unfortunate events. In 1975, the firm experienced losses for the first time in its history. The veil shrouding the inner-workings of the firm's hierarchy was partially rent as pressure was brought to bear upon the chairman and the president, culminating in their joint resignation in March, 1976.

Additionally the founder and driving force of the firm, H.R. MacMillan died in February of 1976. While he had not been active in the company for the past ten years, his legacy in the form of corporate strategy is very much alive. His passing, with the subsequent public testimonials, has brought the history of the firm and its present role in British Columbia very much before the public view.

These then are the forces which have kindled public interest in the workings of large corporations in general, and the unique occurrences which have put MacMillan Bloedel, Ltd., on centre stage in British Columbia. We are thus confronted with a complex of charges against corporate concentration and a considerable amount of information concerning the British Columbia forest sector in general and MacMillan Bloedel in particular. What remains is to review what theory exists in the area, to organize the available information in conformity with that theory, and from analysis of the data to determine the nature and role of MacMillan Bloedel in British Columbia and Canada, and the economic and social implications for the public interest of its behaviour.

METHODOLOGY

Unhappily there is no universally accepted theory for the analysis of corporate concentration. On the one hand, traditional industrial organization economists¹ emphasize the influence of the corporation upon individual, narrowly defined markets. Corporate power then is analogous to market power

where the latter is defined as the ability to "behave persistently in a manner different from the behaviour that a competitive market would enforce on a firm facing otherwise similar cost and demand conditions."² For the multi-market corporation, corporate power could then be defined as some composite of the power exerted in each individual market.

The position of the traditional industrial organization economists has been clearly spelled out in the submission of R.E. Caves to The Royal Commission on Corporate Concentration, and it is worth reviewing. He states:

1. *Corporate power is an economically meaningful concept only in terms of a company's ability to affect the allocation of resources in a particular market; therefore large size matters mainly because it usually coincides with large market shares.*
2. *Corporate power in product markets depends on the elements of the structures of those markets, including seller concentration but also many others.*
3. *Corporate size does not directly contribute to market power. It may contribute indirectly because diversification strengthens a seller's power in any one of his markets, but the statistical evidence is not clearcut. Large size may also secure artificial advantages in the capital market for the borrowing firm; the evidence on this hypothesis is also incomplete.*
4. *Scale economies explain the high concentration of sellers in many Canadian industries but not the presence of large diversified firms. Diversification can achieve some efficiencies, but U.S. statistical evidence does not confirm any clear economic gains from diversification.*
5. *Large corporations that are under managerial control may suffer reduced efficiency because their managements can indulge in the pursuit of goals other than maximum long-run profit for the owners.*

The Royal Commission, however, has a broader charge dealing as it does with both the wider implications of corporate concentration for the public interest and the adequacy of policy *vis-à-vis* those concentrations. Analysis of these broad issues has fallen, some would say by default, to what have come to be called "institutional economists". This group or school, which is based upon the seminal work of Thorstein Veblen and whose most outspoken contemporary adherent is J.K. Galbraith, views the corporation from an evolutionary perspective rather than through the restrictive, but elegant models of neo-classical theory. Hamilton succinctly describes the difference between the two schools in his description of the work of Berle and Means:

Unlike the traditional price theorist who fits the corporation into his hedonistic theory under the heading, "The Economics of the Firm", and goes on to treat it as subject to the same hedonic calculations that he assumes explain individual behavior, Berle and Means treat the corporation, its growth and structural changes, as part of the institutional fabric of modern society. A large part of the study is devoted to a detailed analysis of how this institutional fabric has been changing through growth and new usage.³

The structure of this study reflects both of these views, covering as it does an historical review of the firm's development, an analysis of the markets in which the firm participates and a discussion of the non-economic impacts of the firm on its environment.

The remainder of this chapter traces out the growth of the firm from a lumber selling agency to a major, vertically integrated, multi-national corporation. In the process the underlying growth strategy and the type of executive control which have characterized the firm are isolated and discussed.

Chapter II comprises a series of industry studies and concludes with an analysis of the firm as a multi-plant, multi-product enterprise. Each major market in which MacMillan Bloedel participates will be analyzed using the conventional industrial organization paradigm of structure/conduct/performance. Under the structure rubric, interest will centre upon the concentration of sellers and buyers and barriers to entry confronting either buyers or sellers. Because MacMillan Bloedel is primarily involved in commodity markets only fleeting attention will be paid to the structural dimension of product differentiation. The mechanics by which the firm and the industry determine price will be the primary focus of the discussion of industry conduct. With respect to performance, interest will be centered on technical efficiency with emphasis on the existence, and the firm's achievement, of scale economies at the level of the plant. In essence the first seven sections of Chapter II represent a series of industry studies, each necessarily cursory as any one of them done in detail would represent a major study. The final three sections of the chapter provide an analysis of the economics of the firm as a whole, emphasizing scale economies attributable to the multi-plant, multi-product corporation, the firm's research and development effort and the possible existence of supercontrol groups in the forest products industries.

While Chapters I and II place MacMillan Bloedel in the context of the British Columbia forest products sector as of the mid-1970's, Chapter III consists of an attempt to quantify the impact of the firm upon its environment in dimensions other than those which are purely economic.

MacMillan Bloedel is a relatively large institution within British Columbia and plays a multiplicity of roles ranging from philanthropist to resource manager. In some regions of the province it is the major employer, in others it is the only employer. Because it is absolutely large, and in the context of British Columbia relatively very large, its effects upon the

Table I.3

FOREIGN CONTROL OF WOOD INDUSTRIES*

1973

	Foreign	% of Total	Canadian	% of Total	Unclassified	% of Total	Total
Number of Corporations	91	4.6	922	46.8	959	48.6	1,972
Assets	\$000,000		\$000,000		\$000,000		\$000,000
Equity	845	28.8	2,002	68.4	81	2.8	2,928
Sales	224	23.4	708	73.8	27	2.8	959
Profits	879	24.2	2,613	72.0	136	3.7	3,627
	121	25.3	350	73.2	7	1.5	478

* Includes: Sawmills, veneer and plywood mills, sash and door and planing mills, wooden box factories, coffin and casket industry, miscellaneous wood industries.

FOREIGN CONTROL OF PAPER & ALLIED INDUSTRIES*

1973

	Foreign	% of Total	Canadian	% of Total	Unclassified	% of Total	Total
Number of Corporations	110	22.7	238	49.2	135	27.9	484
Assets	\$000,000		\$000,000		\$000,000		\$000,000
Equity	3,761	44.8	4,440	52.9	neg	8,398	
Sales	1,547	43.0	2,045	56.8	neg	3,600	
Profits	2,809	44.6	3,499	55.5	neg	6,300	
		34.0	526	65.8	neg	799	

* Includes: Pulp & paper mills, asphalt roofing manufacturers, paper box and bag manufacturers, other paper converters.

Source: Statistics Canada, "Corporations and Labour Unions Return Act - Report for 1973," Part I, Corporations Catalogue 61-210.

Table I.4

FOREIGN CONTROL OF B.C. FOREST SECTOR

% of Total Capacity Controlled* by Foreign Interests			
Newsprint	Market Pulp	Plywood/ Veneer	Lumber
32.6	63.2	59.4	46.5

* "Control" defined as 50% or more of common shares held by foreign interests; or 40% or more of common shares held by a single foreign group with no Canadian group holding an equivalent share.

Source: Table I.12 and various annual reports.

In 1909, having failed to fulfill the terms of the lease, the Canadian Industrial Company offered this prime timber claim for sale. Brooks-Scanlon were the successful bidders, acquiring at the same time water rights to the Powell Lake. In that year the Powell River Pulp Co. was incorporated, in 1911 it was reorganized into the Powell River Co., and in 1912 it began producing newsprint. Production began and remained at 250 tons/day until the mid-1920's when postwar demand warranted a doubling of capacity. Over the next 20 years the firm continued to specialize in newsprint, acquiring additional timber as its original stock was depleted or as increased capacity necessitated increased inputs.

The Powell River Co. was originally a family firm and, up to the merger with MacMillan and Bloedel in 1959, the positions of authority within the firm had been held by members of the Brooks and Scanlon families. In the early years control remained in Minneapolis, but in the late 1930's it was shifted to Vancouver.

Bloedel, Stewart and Welch, under the guidance of J.H. Bloedel, a Washington State lumberman, began operations in British Columbia in 1911. The firm began as a logging operation and did not enter manufacturing until its acquisition, in 1923, of a cedar mill. During the 1920's the firm acquired substantial cutting rights on Vancouver Island. Especially important was the purchase of the extensive Hill-Quinn tracts in 1927 which gave the company "one of the largest forest reserves of any company in British Columbia."¹⁰

In partnership with the King-Farris interests the firm constructed the Great Central Lake sawmill in 1927 on Vancouver Island. Eventually the mill was taken over completely by Bloedel, Stewart and Welch. The year 1937 saw construction of the Somass mill at Port Alberni, built originally as a single line unit and now the largest sawmilling facility in the MacMillan Bloedel complex.

Bloedel, Stewart and Welch was also a family run firm. In the 1920's Prentice Bloedel, son of J.H. Bloedel, entered the firm and eventually took over his father's interests and the presidency of the firm. Under his direction, Bloedel, Stewart and Welch constructed, in 1948, a Kraft mill at Port Alberni to use the waste materials of the Somass sawmill. The firm entered the 1950's vertically integrated from forest management to pulp manufacture, and with timber holdings in excess of the requirements of its converting facilities.

The history of the H.R. MacMillan Export Co. is tied to the career of the man whose name it bore. Harvey Reginald MacMillan was, throughout his adult life, involved in forestry and forest based industries, and this singularity of direction marked the development of the corporation he came to control.

He graduated from Yale in forestry, saw British Columbia for the first time in 1907 while on a coastal survey of timber areas, returned to Ottawa

where he was made Assistant Director of Forestry, and returned to British Columbia in 1912 to organize and direct the province's Forest Service. He served in the Great War first as a special Trade Commissioner to organize timber supplies for the war effort, and later as Assistant Director of the Imperial Munitions Board, in which capacity he coordinated the production of spruce for the Allied airforces.

Between these two tours of duty MacMillan took a position as assistant manager at a sawmill in Chemainus, British Columbia. He was fired from this position and

when he was walking out of the door of the manager's office he turned and said, "When I come through this door again I'll own this (deleted) place."¹¹

The statement was prophetic for the Chemainus sawmill was eventually absorbed by the H.R. MacMillan Export Co.

At war's end MacMillan did not return to the British Columbia Forest Service and instead "with one stenographer started a timber export business."¹² The H.R. MacMillan Export Co. began simply as a sales agency with neither timber nor sawmilling facilities of its own. However, thanks to the drive of its founder and to the connections he had made during the war, the firm thrived. W.J. VanDusen was brought into the firm and the two principals established markets in the United Kingdom, India, Japan and other areas of the Far East. At this point the firm integrated forward into shipping by forming the Canadian Transport Co. Ltd., a wholly-owned subsidiary. This was a first step in what became a systematic strategy of vertical integration.

During the 1920's the firm acquired some timber stands and sawmilling capacity, but concentrated its efforts on marketing with the result that "...practically all lumber production from British Columbia mills was sold through the MacMillan firm."¹³ Evidently the firm enjoyed a monopsony in the purchase of British Columbia lumber. Eventually those confronting that monopsony reacted.

By 1935 he (MacMillan) was the world's largest charterer of merchant shipping and making so much money selling other companies' timber that a group of British Columbia firms decided to set up an export agency, Seaboard Lumber Sales, and its affiliate, Seaboard Shipping.¹⁴

The creation of this sales organization cost the H.R. MacMillan Export Co. a large portion of its supply (the Seaboard group accounted for 80 per cent of provincial lumber production) and confronted the firm with a direct competitor. MacMillan reacted by accelerating the drive for backward integration. He acquired both timber and manufacturing capacity, notably the Vancouver Plywood Plant, and the Alberni Pacific Lumber Company which had been owned by the British lumber firm of Denny, Mott and Dickson.

The H.R. MacMillan Export Co. survived the crisis and maintained the momentum of its drive for secure timber rights well into the 1940's.¹⁵ The Second World War created a buoyant market for lumber and the firm prospered throughout the hostilities. MacMillan served during the conflict first as Timber Controller for Canada and then as President of Wartime Merchant Shipping Ltd.

At the close of the war MacMillan returned to the firm and reinstated the programme of integration, especially forward integration. The Victoria Lumber Co. at Chemainus was acquired and MacMillan's promise to its owner kept. Following Bloedel, Stewart and Welch's lead in the use of sawmill residuals in the pulping process, MacMillan constructed a 90 thousand ton/annum capacity Kraft pulp mill at Nanaimo which went into production in 1951. The firm embarked on this substantial expansion project with no experience in pulp making.

*Without the knowledge of pulp mill economics the firm hired a local consulting firm, which had previous mill construction experience, to conduct engineering feasibility studies, evaluate locations, provide estimates, designs and purchases of all equipment, as well as supervision of construction.*¹⁶

As of 1951 the H.R. MacMillan Export Co. was integrated from timber holding through sawmilling, plywood and pulp manufacture to transportation. It had no papermaking facilities. While its holdings of timber were extensive the firm depended upon market purchases for up to one-third of its converting requirements.

In 1951 the H.R. MacMillan Export Co. and Bloedel, Stewart and Welch merged in the "largest consolidation of its kind in the industry in Canada to that date".¹⁷ In his explanation of the rationale behind the merger Hayter argues that there was "substantial rationalization and consolidation of flows of raw materials between logging camps and converting facilities", that the H.R. MacMillan Export Co. "provided a strong management team and an international and domestic lumber sales organization, the Bloedel firm contributed a large surplus of timber", and the merger reduced the level of competition in many classes of products.¹⁸

The rationalization and consolidation argument is clear. The two firms had expanded in the Alberni area to the point that they had a large number of physically contiguous operations. After the merger the relatively small (58 million fbm/annum) Great Central Sawmill was closed while capacity was increased at the Alberni Pacific and Somass mills. Also residuals were routed so that wastes from MacMillan holdings in the Alberni's now went to Bloedel's pulp mill at Port Alberni rather than the Harmac (Nanaimo) mill.

The value of MacMillan's "international and domestic lumber sales organization" to Bloedel, Stewart and Welch is unclear as the latter firm was a member of the successful Seaboard marketing group.

The extreme desirability of Bloedel's timber rights to MacMillan is understandable. As a result of the crisis precipitated by the formation of the Seaboard group MacMillan had become especially sensitive to his firm's dependence on external sources of timber. Moreover the accumulation by other integrated firms of vast tracts of forest lands had reduced the supply of uncommitted timber, thereby increasing the vulnerability of any firm relying on the open market for raw material.¹⁹

The growth oriented management of the H.R. MacMillan Export Co. must have had a strong appeal to Prentice Bloedel. His was a private company, directed by the Bloedel family for a half century. However there were no male heirs and hence no assurance that the firm would carry on after his departure. Amalgamation with MacMillan promised both survival and expansion, although it meant a subservient position for Bloedel.

Finally, the merger unambiguously reduced competition in a number of markets. Hereafter the firms would no longer compete for timber rights. Competition in lumber markets was reduced. MacMillan's position *vis-à-vis* the Seaboard group was strengthened. And of course the increased competition which would have resulted from the entry of two new producers in the Kraft pulp market was never realized.

In the 1951-1959 period MacMillan and Bloedel Ltd. rapidly expanded its operations both vertically and horizontally. During this period the Somass, Alberni Pacific, Chemainus and Canadian White Pine sawmills were modernized and expanded. Number 2 machine was added to the Harmac pulp mill raising the capacity of that operation from 90 to 245 thousand tons/annum of bleached Kraft pulp.

Major expansion of the Port Alberni pulp mill put the firm further forward on the integration stream. Number 2 machine, with an initial 80 thousand ton/annum Kraft linerboard capacity placed the firm squarely in competition with Crown Zellerbach, previously the sole producer of linerboard on the Coast. By 1958 machines number 3 and 4 were operating with a combined newsprint capacity of 220 thousand tons/annum. Integration into newsprint placed the firm in direct competition with the Powell River Co. (1958 capacity of 500 thousand tons/annum) and Crown Zellerbach (1958 capacity of 265 thousand tons/annum). Thus, by the end of the 1950's the firm was integrated from timber holding through lumber, plywood, pulp, newsprint and linerboard production into shipping and marketing.

During this period the assets of MacMillan and Bloedel were nearly doubled. The expansions were financed through the retention of \$66.7 million of earnings and an addition to long term debt of \$26 million. Despite the assumption of these sizeable loans the firm ended the period in a strong financial position with only 15.7 per cent of its assets financed by long term debt.

By the mid-1950's the Powell River Co. was in a somewhat different position. The firm had centered its attention on the acquisition of a strong timber base

and on the production of newsprint. It had been successful in both endeavours. Its holdings of secure timber rights exceeded its converting requirements and, prior to the entry of MacMillan and Bloedel, it accounted for over 70 per cent of the province's newsprint which conferred upon it market power in the western United States' newsprint market.²⁰

However the Powell River Co. was not nearly as fully integrated as MacMillan and Bloedel. The firm operated several small lumber mills and in 1954 acquired a corrugated container manufacturer, Martin Paper. Despite this diversification the firm depended for three-quarters of its revenue on one product, newsprint, and was in the process of increasing that dependence by construction of paper-machine number 9 which was to come on-line in 1957 with a capacity of 87.5 thousand tons/annum.

The management of the Powell River Co. did plan to integrate more fully in the future. In the early 1950's the firm had a surplus of funds which it intended to invest in a Kraft mill. It acquired Martin Paper which would provide a captive market for linerboard, in anticipation of the expansion into Kraft production. Unfortunately for the Powell River Co., MacMillan and Bloedel moved more quickly and in 1957 the Port Alberni mill began production of linerboard. At this juncture the Powell River Co. sold half interest in Martin Paper to MacMillan and Bloedel for \$2.5 million, which was \$0.26 million more than the total book value of the corrugating firm.²¹

Powell River's motivation in selling a 50 per cent interest in its subsidiary to MacMillan and Bloedel is again easily understandable. Powell River at one time had intended to integrate backwards from container manufacture to board manufacture. Once MacMillan and Bloedel had entered the board field the thought likely did occur to Powell River executives that MacMillan and Bloedel might integrate forward into the container field. Had MacMillan and Bloedel done this, the result might well have been a battle for sales of shipping containers which would force their prices well below the ceilings set by American imports; or, alternatively, if an agreement on prices were reached, excess capacity and losses in the container mills of both companies and in MacMillan and Bloedel's board mill.

There is some evidence that the industry's executives were thinking about the possibility of excess capacity.

Mr. H.S. Foley of Powell River was of the opinion that a production of 50,000 tons a year was necessary to efficient operation of a Kraft mill, and that Martin Paper's annual consumption was about 30,000 tons a year. Had Powell River produced 50,000, the remainder, 20,000, would have had to be sold on world markets, which he regarded as highly competitive... the importance of this evidence lies in its showing that the spectre of excess capacity was present in Mr. Foley's mind.²²

The joint holding of Martin Paper was the first step toward complete amalgamation of the two firms. While the actual merger negotiations were a well-kept secret the perceived benefits of the merger to each party are fairly clear.

The Powell River Co. sought a more complete degree of integration which MacMillan and Bloedel, with its Kraft, linerboard, plywood, and lumber operations could provide. The firm was especially in need of Kraft pulp as the technology of newspaper printing had changed, requiring a stronger newsprint. The addition of Kraft rather than sulphite pulp to the newsprint provided that strength. The Powell River Co. had sulphite, not Kraft, facilities.

Through the merger MacMillan and Bloedel would acquire secure timber, of which it was always in need, a newsprint sales organization to market the output of the Port Alberni mill, and, thanks to the Powell River Company's aversion to borrowing funds, an increased debt capacity. Moreover the merger would give the resultant firm a pre-eminent position in the western United States' newsprint market.²³

It has been argued that the Powell River Co. was in need of investment funds to upgrade its production facilities and resorted to merger to secure these funds. Roughly 57 per cent of its newsprint capacity was accounted for by machines 8 and 9 which had been built within the preceding decade and were of reasonable size. However the remaining 43 per cent was made up of newsprint machines which ranged in age from nearly a half to a quarter century. Given that these facilities were in need of modernization, it is not obvious that the firm could not find funds to effect that modernization on its own. The firm had no long term debt and based upon its sound financial position could have found lenders. That it did not do so reflects upon the abilities of its management.

In any merger there are forces at play which impede agreement, one set of which Bain calls "enterprise sovereignty considerations".

*These are forces virtually deterring mergers, and inhere in the difficulty of potential parties to mergers in agreeing on terms. Fundamentally, they are attributable to the reluctance of individual ownership-management units to yield up their sovereign controls over their operations to a larger combined unit.*²⁴

In the Powell River Co./MacMillan and Bloedel amalgamation the question of which set of management was to yield control was not resolved at the time of merger. Technically the Powell River Co. 'took over' MacMillan and Bloedel. Two Powell River principals, H.S. Foley and M.J. Foley, became, respectively, vice chairman of the board and president. However J.V. Clyne, H.R. MacMillan's designated successor, held the position of chairman of the board, and 60 per cent of the stock of the new company was held by former MacMillan and Bloedel shareholders. The issue of control was resolved within a year and a half.

Foley quit in dramatic fashion, sending a copy of his resignation letter to the newspapers. He said it had been understood that Powell River and MB men would have equal representation on the board of directors and executive committee of the merged company. Clyne was to have been an impartial chairman.

Foley wrote that over the previous year 10 key Powell River people had left their jobs and both the executive committee and the board of directors had been trimmed to give MacMillan's men a majority.

'Your (Clyne's) prejudiced attitude and actions since the amalgamation, contrary to all our understandings, leave me no alternative but to conclude that I can be of no further use to the (company) while you remain as chairman,' Foley said.²⁵

Clyne described the last confrontation as follows:

'About a year after the merger, a serious dispute arose between us concerning the ownership of shares in a subsidiary, which I maintained were held in trust for the company and which Foley said were owned beneficially by certain individual shareholders. As a result of this dispute and its implications, I asked Foley for his resignation and he resigned at the following meeting of directors.

Some time later, Foley approached several of the directors of MacMillan, Bloedel and Powell River with a proposal to sell five million shares of MacMillan, Bloedel and Powell River Limited to St. Regis, an American competitor. The group of the merged company indicated to Foley or to the representatives of St. Regis that they were prepared to accept the offer, which would net them about three dollars above the market price. They were not, however, able to raise the full five million shares among themselves but were only able to assemble two and a half million, so they decided to approach H.R. MacMillan and Prentice Bloedel to see if they would join in the deal. At that time the issued shares of the company were twenty million, so a holding of five million would make St. Regis the largest shareholder and would hand over to it the effective control. H.R. MacMillan told the representatives of the Powell River group that the whole matter should be immediately brought to my attention as the chairman of the company, which was done. I told the representative of the Powell River group of directors that the whole deal was entirely improper; the price at which the Powell group of directors were prepared to sell would give them a profit of three dollars a share over the market, which was not available to the general body of shareholders, and in my opinion the proposed transaction was legally questionable, improper, and unfair to them.

I immediately brought the subject before the executive committee of the company, some of the members of which were former Powell River

directors involved in the deal. I told them that their conduct savoured of the highest degree of impropriety and that they were no longer suitable persons to sit on the board, representing the interests of all the shareholders. I told them that I would not recommend the nomination of any of the directors who were involved in the deal at the annual meeting of the company, which was to take place the following month, and that I would give the shareholders the reasons why I did not think they should be so nominated. This was done, and all the directors who had been willing to sell their shares to St. Regis were not nominated and shareholders were informed of the reasons.²⁶

By 1966, the year Powell River was dropped from the company's name, only one of the original Powell River directors, Anson Brooks, remained on the board.

Once Clyne had settled the issue of control with the Powell River group he initiated an expansion policy which carried well into the 1970's. This expansion was realized through the modernization of, and additions to, existing facilities, the construction of a new plant, and through acquisition.

The most important modernization and expansion programme was carried out at Powell River. Between 1965 and 1976 newsprint machines numbers 1, 2, 3, 4, and 6 were shut down, number 5 was modernized, and number 10 (with capacity of 160 thousand tons/annum) was added. The sulphite mill was closed and a Kraft mill came on-line in 1968. Most recently, a thermo-mechanical pulping operation has been constructed, replacing two groundwood mills.

The newsprint capacity of the Port Alberni mill was increased by 149 thousand tons/annum with the addition of number 5 paper-machine, while Kraft pulp capacity at Harmac was expanded by 175 thousand tons/annum.

The litany of acquisition and construction of production facilities between 1960 and 1976 is too long to describe in detail here. Table 1.5 (page 25) shows that the building materials, pulp and paper and packaging groups each shared in the construction and acquisition drive.

It was also during this period that MacMillan Bloedel evolved from a national to a truly multi-national firm. By 1968 it held interests in, or owned outright, production capacity in Great Britain, Holland, Belgium, Spain and the United States.

By far the most important of these was the construction of an integrated mill at Pine Hill, Alabama. Apparently the hiring in the early 1960's of several American executives who were familiar with the south eastern United States' forest industry led to the initial investment decision. After commencement of the project it was recognized that the firm was in a vulnerable position *vis-à-vis* other U.S. linerboard manufacturers as it had no secure markets for its output. Resolution of the problem was sought through the sale of 40 per cent interest in the mill to the United Fruit Co., a firm which used considerable quantities of linerboard in the manufacture of fruit packing boxes. In 1970 United Fruit's parent, United Brands, became dissatisfied with the performance of the joint venture and sold its share back to MacMillan Bloedel.

The soft markets for linerboard which characterized 1970 and 1971 prompted the firm's acquisition of the Hankins Container Company (a division of Flintkote Corp.) a manufacturer of corrugated containers. Paradoxically, by 1974 the situation had reversed and the firm reported that "in order to obtain the required materials [for the corrugating plants] it was necessary on several occasions, to purchase paper from alternate suppliers at premium prices with a corresponding impact on profit margins".²⁷

International expansion continues to the present. By 1976 France, Brazil, Malaysia, and Indonesia had been added to the list of countries hosting production operations in which MacMillan Bloedel has interests. Table I.6 shows the more important of the firm's international operations.

Both the domestic and international growth of the firm during the 1960-1976 period are characterized by vertical and horizontal expansion. The firm acquired, through its purchase of E & N Railroad properties in 1964, significant additions to its resource base. Modernization, construction and acquisition resulted in impressive additions to its production capabilities in every product (see Table I.7). As will be seen shortly, this growth has led the firm to a current position which is, in either relative or absolute terms, of considerable moment.

This cursory review of the firm's history allows the identification of trends which, in the absence of a more explicit statement, can be interpreted as a corporate strategy. Clearly the firm has been oriented toward growth. This is of course a common corporate goal; what is interesting is the isolation of long-run policies which brought about achievement of that goal.

The firm expanded primarily within the forest products industries--it is no conglomerate. The movement backwards from marketing to sawmilling, to logging, and to resource management, and forward to plywood, pulp, paper and packaging manufacture constitutes a very weak degree of diversification. In the 1970's MacMillan Bloedel entered into more radical diversification with emphasis placed on the Ventures Group and on the transportation of non-wood based products. Performance of the Ventures Group was poor, that of the Transportation Group was disastrous. Losses in shipping were so great in 1975 that they caused the firm to incur a loss for the first time in its history. These excursions can be considered anomalous and terminated. The dismissal of the senior executives under whom non-forest related diversification took place, and the appointment of C. Knudsen to the presidency with the clear mandate "to give MacMillan Bloedel strong leadership as a well-positioned financially strong company concentrating on the production and marketing of forest products"²⁸ clearly points to resumption of the historically successful policy.

The firm's emphasis on vertical integration evolved as a response to threats either to its source of supply or to the markets to which it sold.

The original backward drive for timber and sawmilling capacity was in reaction to the creation of a competing sales agency. Its forward integration into corrugated container manufacture was to ensure markets for linerboard when faced with a market narrowed by the forward integration of other linerboard manufacturers. Its holdings in European paper manufacturers guarantee markets for its pulp.

This drive for secure inputs and secure markets for its outputs, while strong, seems not to have been as strong as that of its British Columbia competitors. Essentially a firm has two investment alternatives; it can expand only when it has guaranteed inputs and a secure market for its output, or it can expand without these guarantees. MacMillan Bloedel, relative to other British Columbia firms, relied more on the second alternative. It will be recalled that both Bloedel, Stewart and Welch and the Powell River Co. had excesses of timber to converting needs, while prior to both mergers MacMillan was in a deficit position. MacMillan and Bloedel beat the Powell River Co. into linerboard production even though Powell River already had a captive market for its output. MacMillan and Bloedel also went into newsprint production without a developed sales system. And, most recently, the Pine Hill investment was made without captive corrugating facilities. J.V. Clyne verbalized this strategy:

*Any Company increasing its capacity or creating new capacity must therefore be prepared to face vigorous competition in the immediate future. The increased capacity may well result in lower prices which we will have to face, but the larger volumes of production in the case of our Company would compensate for any loss of profit due to a diminution in the future price.*²⁹

Success in this confrontation with "vigorous competition" required that the firm possess some competitive advantage. That advantage derived from its holdings of prime timber and its insistence on locating manufacturing facilities at low-cost sites.

The policy of acquiring low-cost, high quality inputs is clear.

*The policy of purchasing timber and forest land was pursued on a remarkably consistent basis by each of the founding companies, even through the depression years when shareholders received no dividends and many owners permitted their properties to revert to the Crown because they were unwilling or unable to pay rentals and taxes. Securing a basic supply of timber of the required type, in a desired location and at reasonably predictable costs, provided the foundation for the progressive development of a fully integrated complex capable of utilizing to a very high degree all of the species and grades on these tenures.*³⁰

As will be argued shortly the firm was extremely successful in this endeavour.³¹

H.R. MacMillan early recognized that forest products were essentially low value/weight products, and therefore success in the sector required low cost transportation facilities.

*All roads will lead to salt water. The coastwise systems of protected waterways will make all logs accessible to all coastwise conversion plants. The cost of moving logs on salt water may possibly decrease. The basic value of logs for this large region will continue to be the short distance from the stump to the hundreds of miles of protected salt water highways.....The quality of the logs will approach a mediocre level. All small trees will be taken the same as in Eastern Canada. The stumpage value of the forest will depend less on quality and more upon the cost of taking the log from the stump to the competitive strategically-located conversion plants.....There is the further advantage that the log product of any logging operation may be sorted and delivered to those conversion units that can use the logs to create the highest possible values. This can be done even if the conversion units are at widely separated points on salt water as at present.....There are great advantages in locating conversion plants in a town or city. The city presents great advantage for the sale of fuel and by-products. Some mills buy power, others sell power, which is only possible near centres of population. Plants are more cheaply maintained if near the engineering and skilled services of larger centres. The high-class workmen, without whom no modern plant can be competitively operated, are unwilling to live in communities lacking the educational facilities and other amenities of town or city life.*³²

Certainly Port Alberni, Powell River and Harmac conform to these criteria.

Parenthetically, that the firm did not share in the expansion of the Interior forest industries in the 1960's might well be traced to this policy of tide-water location. One might speculate that if H.R. MacMillan had still been in control the change in transportation economics would have been recognized and the firm would have invested, as did its competitors, in this area. This remains only conjecture.

Finally, the firm also clearly recognized the benefits of holding power in those markets wherein it participates. As will be discussed in detail in Chapter II, the firm has been very successful in acquiring an oligopolistic position in a number of domestic and international markets.

In summary, MacMillan Bloedel has practised a strategy of pervasive vertical integration and integral to this strategy are the holding of prime timber reserves, and the construction or acquisition of tide-water manufacturing complexes. This has resulted, by design or by convenient coincidence, in a strong position in a number of markets.

This brief history also gives some insight into the style of executive leadership which has characterized the firm. In a word, that leadership has been autocratic. H.R. MacMillan guided the firm until the late 1950's. From that period (see Table I.8) only one figure consistently held power--J.V. Clyne.

Upon Clyne's retirement from the chairmanship of the board and Chief Executive Officer (CEO) position in 1972, the firm adopted organizational policies which separated the responsibilities of the chairman of the board and those of the CEO. In his words,

Under the organizational policies adopted by our company the chairman is required to keep the directors fully informed, in order to enable them to discharge their duties properly and in the best interests of the shareholders. As a leader of the board, he has the duty on behalf of the board to see that management carries out the policy directions of the board and maintains the highest standards of performance. The chairman is the watchdog for the shareholders and is likewise the spokesman for the board and for the company in all its public attitudes. ³³

That Clyne himself could not have lived under the arrangement was implied by Robert Bonner the following year in his statement of resignation from the chairmanship.

A year ago in February my predecessor, Jack Clyne made public the company's new corporate philosophy of leadership which had then been in effect since April, 1972, by which day-to-day corporate leadership and policy-making became a split but co-operative function between president and chairman, with the board taking an enlarged responsibility in keeping with the growing legal liabilities placed upon directors. The key ingredient of that new arrangement was, however, the divided leadership of the company.

Now the press records that Jack Clyne said of this new arrangement that it would have been difficult if not impossible, for him to operate under the new philosophy. While I haven't questioned him closely on that comment, I am sure he had in mind the difficulties of exercising a shared command, which sooner or later must raise in the mind of anyone involved the question of whether he is fully, effectively and satisfactorily employed, having regard perhaps to alternatives which might beckon.

D. Timmis, president and CEO from 1973 through early 1976, and G. Currie, chairman from 1974 through early 1976, also found it difficult to live up to the organizational policy. J.E. Richardson, acting president from March to July 1976, explained the dismissal of the two men in this way,

Apart from the transportation losses, the board felt a progressive erosion of confidence in its two top executives. They did not always communicate fully with other directors in several areas of

corporate affairs and it was a combination of these circumstances which culminated in the board's decision [to fire them] of March 26 .³⁵

In July of 1976 C. Calvert Knudsen was appointed president and CEO. He has been described as "more of a leader than autocratic",³⁶ "intellectually mature and always able to see another person's argument",³⁷ and, at times, "impatient".³⁸ Whether Knudsen becomes the first chief executive of the firm to successfully implement a policy of shared authority remains to be seen. However, the past does not augur well.

MACMILLAN BLOEDEL'S CURRENT POSITION

Within the context of the Canadian forest sector MacMillan Bloedel, Ltd. is the largest enterprise. It is both trans-national and multi-national. Its Canadian manufacturing units literally span the country from coast to coast with facilities in Port Alberni on Vancouver Island, Calgary, Regina, Winnipeg, Thunder Bay, and St. John, New Brunswick. It has sales offices or distribution centres in every province except Newfoundland and Prince Edward Island.

Internationally the firm controls or has interests in production or distribution operations in the United States, the United Kingdom, Australia, Hong Kong, Japan, Singapore, Malaysia, Thailand, France, Belgium, Holland, Spain, Sweden, the Netherlands, Antilles, and Brazil.

MacMillan Bloedel Limited qualifies both nationally and internationally as a large corporation by nearly any criteria one might wish to apply.

According to Fortune's 1975 listing of the "300 Largest Industrial Corporations Outside the U.S.",³⁹ MacMillan Bloedel ranked 138th according to 1974 sales.

Within Canada, MacMillan Bloedel held, in terms of revenues, the fourteenth rung of the Financial Post's 1975 listing of the top one hundred Canadian manufacturing, resource and utility companies (see Table I.9).

Among the world's pulp and paper producers, MacMillan Bloedel is ranked, in terms of assets or employees, as the twelfth largest company and in terms of paper and paper board production as the thirteenth largest (see Table I.10).

Within the context of British Columbia, the firm ranks as the second largest public company in terms of assets (the largest being B.C. Telephone) and the largest in terms of gross revenue (see Table I.11). In the provincial forestry sector, MacMillan Bloedel is unambiguously the titan. In terms of assets it is more than three times larger than its closest competitor, and in terms of gross revenues it is more than four and one-half times larger. Its assets are greater than the combined assets of the next seven largest firms (see Table I.12).

The firm participates in a myriad of markets, the number constrained only by the numerator's fervour in delineating separate theoretical markets where these are defined as collections of sellers offering to a common group of buyers products perceived by those buyers to be close substitutes.

Obviously the firm participates as a buyer in thousands of markets and when grade, size, and locale are considered, acts as a seller in probably just as many others. However, we will consider only seven of these, chosen according to the criteria that the market is important to MacMillan Bloedel (i.e., it represents a significant source of revenue or costs) or that MacMillan Bloedel is important to the market (i.e., it is a relatively significant buyer or seller). Naturally, in some instances both criteria will be fulfilled. The product markets chosen for investigation are timber, lumber, plywood, market pulp, newsprint, fine paper and linerboard/packaging.

Additionally, the scope of this study is constrained geographically in that we centre our attention on the firm's role as a producer on the West Coast of British Columbia. Investments elsewhere are certainly not negligible, especially in the Rothesay Mill (New Brunswick), and the Pine Hill operation (Alabama). However, limits on time and resources necessitate some limitation and the firm's considerable impact on the British Columbia Coast makes this area the logical focus of our study.

Table I.5

CONSTRUCTION AND ACQUISITION OF PRODUCTION
FACILITIES WITHIN CANADA,
MacMillan Bloedel, 1960-1976

	<u>Year of Construction (C)</u> <u>or Acquisition (A)</u>
BUILDING MATERIALS	
<u>Lumber</u>	
Wood Room #3 (Harmac)	(C) 1963
Powell River Wood Room	(C) 1966
Queensborough Mill	(C) 1974
Wood Room #4 (Harmac)	(C) 1976
<u>Plywood</u>	
Nipigon, Ontario	(A) 1973
<u>Aspenite</u>	
Hudson Bay, Saskatchewan	(A) 1965
Thunder Bay, Ontario	(C) 1975
<u>Panelboard</u>	
Vancouver, British Columbia	(C) 1965
<u>Mouldings</u>	
Toronto, Ontario	(A) 1966
Toronto, Ontario	(A) 1970
<u>Pole Manufacturing</u>	
New Westminster, British Columbia	(C) 1962
PULP AND PAPER	
<u>Linerboard</u>	
Burnaby, British Columbia	(A) 1960
<u>Newsprint</u>	
Rothesay, New Brunswick	(A) 1969
PACKAGING	
<u>Folding Cartons</u>	
Vancouver, British Columbia	(A) 1960

Source: MacMillan Bloedel

Table I.6

PRINCIPAL FOREIGN OPERATIONS-MacMillan Bloedel, 1975

AREA	FIRM	Per Cent CONTROL	ACTIVITY	COMMENT
<u>Europe</u>				
U.K.	MacMillan Bloedel Containers	100	Corrugated Container manufacture (5 plants in U.K.)	Resulted from acquisition of Hygrade and Cooks
<u>Holland</u>				
	Koninklijke Nederlandse Papierfabriek (KNP)	44.5	Fine paper mills in Holland and Belgium	
<u>France</u>				
	La Cellulose d'Aquitane	40.0	Three pulp mills in France, one in Belgium	
<u>Spain</u>				
	Celupal	37.5	Fine paper manufacture	KNP also holds 37.5%
<u>Pacific Rim</u>				
Hong Kong	MacMillan Jardine	51.0	Markets full range of Products	Operates throughout the Far East
Malaysia	Mentiga Forest Products	30.0	Logging and Plywood	
Indonesia	P.T. Sangkulirang	25.0	Logging	
Australia	MacMillan Bloedel Pty.	100	Marketing of Pulp and Paper	Held through MacMillan Jardine Interests in real estate development
<u>S. America</u>				
Brazil	Embrasca-Empreendimentos Florestais e Agricolas	51.0	Afforestation, eventually integrated complex	
<u>N. America</u>				
United States	MacMillan Bloedel Inc., Pine Hill, Alabama	100	Integrated linerboard, lumber and plywood mill	
	MacMillan Bloedel Containers	100	Corrugated container manufacture	Production facilities in 9 states

* Excludes subsidiaries involved in marketing only.

Source: MacMillan Bloedel Annual Reports, 1973, 1975.

Table I.7

PRODUCTION BY COMMODITY
MacMillan Bloedel
1959 and 1973

	<u>1959</u>	<u>1973</u>	<u>Per Cent Change</u>
Lumber (MM fbm)	562.6	1,286.2	+129
Plywood (MM sq.ft.)	271.8	521.0	+ 92
Newsprint (M tons)	608.5	1,296.2	+113
Pulp (M tons)	307.4	454.9	+ 48
Kraft paper and Linerboard (M tons)	71.1	452.4	+536
Fine Paper (M tons)	2.0*	31.6	+1,480
Corrugated Containers (MM sq. ft., 3/8")	631.9	9,593.7	+1,418

*Refers to 1960, start-up of Island Paper Mills

Source: MacMillan Bloedel, Annual Report, 1964 and 1975

Table I.8

SENIOR EXECUTIVES 1956-1976

	<u>President</u>	<u>Chairman of the Board</u>	<u>Chief Executive Officer</u>
1956	H.Berryman	B.Hoffmeister	-
1957	R.Shaw	B. Hoffmeister	-
1958	R.Shaw	J.V.Clyne	-
1959 ¹	R.Shaw	J.V.Clyne	-
1959 ²	M.Foley	J.V.Clyne	-
1960	M.Foley	J.V.Clyne	J.V.Clyne
1961	E.Shorter	J.V.Clyne	J.V.Clyne
1962	E.Shorter	J.V.Clyne	J.V.Clyne
1963	C.Specht	J.V.Clyne	J.V.Clyne
1964	C.Specht	J.V.Clyne	J.V.Clyne
1965	C.Specht	J.V.Clyne	J.V.Clyne
1966	C.Specht	J.V.Clyne	J.V.Clyne
1967	C.Specht	J.V.Clyne	J.V.Clyne
1968	-	J.V.Clyne	J.V.Clyne
1969	-	J.V.Clyne	J.V.Clyne
1970	-	J.V.Clyne	J.V.Clyne
1971	-	J.V.Clyne	J.V.Clyne
1972	R.Bonner	J.V.Clyne	R.Bonner
1973	D.Timmis	R.Bonner	D.Timmis
1974	D.Timmis	G.Currie	D.Timmis
1975	D.Timmis	G.Currie	D.Timmis
1976	C.Knudsen	J.Richardson	C.Knudsen

¹Pre-merger with the Powell River Co.

²Post-merger with the Powell River Co.

Source: MacMillan and Bloedel, then MacMillan Bloedel and Powell River, then MacMillan Bloedel, Annual Report, 1956-1976

Table I.9

THE 20 LARGEST MANUFACTURING, RESOURCE AND UTILITY COMPANIES IN CANADA

1974 DATA

Rank by Sales 1975	Sales 1974 \$1000	Sales or operating revenues \$1000	COMPANY	Rank by assets \$1000		Rank by net income	Net income \$1000
				Rank by assets	Assets \$1000		
1	1	4,259,400	Ford Motor Co.	13	1,462,300	7	154,300
2	3	3,645,000	of Canada	5	2,701,000	2	290,000
3	2	3,613,544	Imperial Oil Ltd.				
4	4	3,112,846	General Motors				
5	5	2,665,606	of Canada Ltd.	17	1,093,053	13	106,097
6	6	2,391,883	Canadian Pacific Ltd.	2	5,434,527	4	181,276
7	7	1,929,170	Bell Canada	1	5,820,597	3	224,436
8	8	1,757,142	Alcan Aluminum Ltd.	3	2,932,802	9	140,601
9	12	1,757,142	Chrysler Canada Ltd.	36	522,028	64	18,601
10	13	1,601,523	Massey-Ferguson Ltd.	10	1,589,096	19	67,359
11	14	1,476,800	International Nickel Co. of Canada	4	2,773,142	1	303,432
12	9	1,453,749	Shell Canada Ltd.	12	1,475,950	8	142,039
13	16	1,147,041	Gulf Oil Canada Ltd.	9	1,631,200	5	161,000
14	11	1,396,330	Canada Packers Ltd.	63	273,117		
15	15	1,133,163	Noranda Mines Ltd.	8	1,707,296	6	154,870
16	20	1,023,522	MacMillan Bloedel Ltd.	16	1,200,063	16	72,299
17	18	897,652	Steel Co. of Canada	14	1,340,336	11	110,861
18	17	866,902	Moore Corporation	23	734,987	17	72,114
19	19	792,701	Domtar Ltd.	25	683,363	14	82,479
20	22	754,018	Seagram Company	7	1,728,618	15	79,845
			Brascan Ltd.	6	1,903,289	10	118,222
			Texaco Canada Ltd.	24	711,693	24	55,049

Source: The Financial Post, July 26, 1975, page 13.

Table I.10

WORLD'S 20 LARGEST PULP AND PAPER COMPANIES

	1974 SALES (\$000)	1974 EARNINGS (\$000)	1974 PRODUCTION (M Tons)			EMPLOYEES
			% OF SALES FROM PULP, PAPER, CONVERTING	PULP	PAPER & BOARD	
International Paper (U.S.)	3,042,200	282,600	83%	1,000	5,993	52,700
Bowater (U.K.)	2,792,273	52,605	36%	520	1,700	38,000
Champion International (U.S.)	2,532,269	100,836	42%	991	1,177	50,100
Weyerhaeuser (U.S.)	2,529,013	276,197	50%	1,107	2,069	48,983
Georgia-Pacific (U.S.)	2,432,350	164,350	38%	257	1,475	34,275
Reed International (U.K.)	2,265,522	105,210	57%	195	1,181	83,000
Crown Zellerbach (U.S.)	1,768,190	124,791	78%	102	2,294	31,850
Mead (U.S.)	1,526,022	88,969	78%	519	1,670	27,000
St. Regis Paper (U.S.)	1,503,425	105,020	87%	1,915	2,204	30,000
Boise Cascade (U.S.)	1,453,550	104,970	51%	63	1,212	27,711
Kimberly-Clark (U.S.)	1,439,400	95,300	92%	754	987	34,463
MacMillan Bloedel (Canada)	1,396,330	72,299	52%	434	1,456	23,800
Scott Paper (U.S.)	1,109,517	69,435	86%	1,447	1,821	20,400
Container Corp. of America (U.S.)	964,690	79,153	47%	882	1,512	21,583
Union Camp (U.S.)	910,308	92,496	94%	1,598	1,672	14,810
Domtar (Canada)	897,682	82,479	70%	230	1,033	18,450
Westvaco (U.S.)	858,465	63,245	94%	100	1,500	16,280
Stors Kopparbarg (Sweden)	811,290	75,960	37%	521	590	14,990
Consolidated Bathurst (Canada)	693,419	62,320	81%	213	1,371	19,900
Begin-Say (France)	687,526	40%		410		10,400

Source: Pulp and Paper International, September, 1975, page 90.

Table I.11

LARGEST 20 B.C. PUBLIC COMPANIES

1975

	Rank by Assets	Assets M of \$	Revenue M of \$	Net Income M of \$
C. Telephone	1	1,262,760	360,687	34,882
acMillan Bloedel	2	1,197,903	1,297,518	(18,943)
ominco	3	869,511	754,433	73,621
estcoast Transmission	4	657,189	416,677	33,019
acific Petroleums	5	639,940	301,490	57,267
ank of B.C.	6	625,006	55,815	2,824
aurentide Finance	7	428,988	72,607	5,516
bbey Glen	8	388,539	107,065	9,316
C. Forest Products	9	368,791	273,426	15,888
irst City Financial	10	302,455	34,712	1,924
rown Zellerbach	11	290,149	303,921	13,270
Kaiser Resources	12	261,869	265,434	64,000
lacer Development	13	253,420	116,187	9,768
oodward Stores	14	251,508	600,669	11,781
on Development	15	209,963	102,939	6,694
eldwood	16	197,821	263,804	5,209
elly Douglas	17	173,478	813,911	7,927
anadian Cellulose	18	157,772	157,247	15,286
lock Bros.	19	146,767	89,634	5,712
inning Tractor & Equipment	20	146,641	173,812	7,942

Source: Vancouver Sun, Wed., June 23, 1976, page 41.

Table I.12

BRITISH COLUMBIA'S 20 LARGEST FOREST PRODUCTS COMPANIES

Company	1975 Sales \$ Millions	Corporate Ownership	Newsprint M tons	Market Pulp/Paper M tons	Plywood or veneer MM sq. ft. (3/8")	Lumber 000,000 ft ³
MacMillan Bloedel	1,297.5	Public	985	776	566	1,520
Crown Zellerbach	303.9	Public	256	313	300	460
Canadian Forest Products	282 *	Private		185	248	360
B.C. Forest Products	273.4	Public	270	480	200	760
Weldwood of Canada	263.8	Public		252	605	380
Canadian Cellulose	157.2	Public		518		255
Northwood Group	155 *	Private		253		700
Weyerhauser Canada	112 *	Private		450		345
Rayonier Canada	95 *	Private		345		350
Scott Paper Ltd.	84.6	Public		55		
Tahsis Company	67 *	Private		260		205
Balfour Guthrie (Canada)	63 *	Private				285
Eurocan Pulp	56 *	Private		300		70
Prince George Pulp	52 *	Private		250		
Intercontinental Pulp	50 *	Private		240		
Crestbrook Forest	44.6	Public		138	38	200
Evans Products	36 *	Private			140	250
Pacific Logging	35 *	Subsidiary of C.P.				65
Doman Industries	34.6	Public				235
West Fraser Timber	32 *	Private				280

* Estimate

Sources: Dominion Securities, Submission to the Royal Commission on Forest Resources, B.C., November, 1976, and Annual Reports of public companies.

Vancouver, B.C.

NOTES TO CHAPTER 1

1. As used by Low in R.E. Low, Modern Economic Organization, Homewood, Illinois, Richard D. Irwin, Inc., 1970.
2. This definition borrows heavily from Carl Kaysen, Donald Turner, Antitrust Policy, Cambridge, Massachusetts, Harvard University Press, 1959.
3. David Hamilton, Evolutionary Economics. Albuquerque, New Mexico, University of New Mexico Press, 1970, pp. 74-75.
4. F.L.C. Reed and Associates, The B.C. Forest Industry; Its Direct and Indirect Impact on the Economy, Vancouver, 1975.
5. Ibid., calculated from Table 7.
6. Canadian Pulp and Paper Association, Submission to the Royal Commission on Corporate Concentration, November, 1975, page 10.
7. This historical section borrows liberally from J.V. Clyne, What's Past is Prologue, The History of MacMillan, Bloedel, and Powell River Limited, an address delivered to the Newcomen Society on Oct. 29, 1964; and from, MacMillan Bloedel Corporate Communications, "Corporate History," mimeo, undated.
8. Task Force on Crown Timber Disposal, Crown Charges for Early Timber Rights, Victoria, 1974, p. 55.
9. Ibid., p. 11.
10. Clyne, op. cit., p. 12.
11. Clyne, op. cit., p. 14.
12. Peter C. Newman, The Canadian Establishment, Vol. 1, Toronto, McClelland and Stewart, 1975, p. 237.
13. Clyne, op.cit., p. 14.
14. Newman, op. cit., pp. 237-238.
15. A more thorough description of the firm's integration into timber holding is provided in the description of the logging industry in Chapter II of this study.

16. Western Pulp and Paper, 1948, p. 84, as quoted in Roger Hayter, "An Examination of Growth Patterns and Locational Behaviour of Multi-Plant Forest Product Corporations in British Columbia," unpublished doctoral dissertation, Univ. of Washington, 1973, p. 154.
17. Clyne, op. cit., p. 13.
18. Hayter, op. cit., pp. 162-163.
19. See Chapter II for a discussion of this issue.
20. See Chapter II for a discussion of the newsprint market. Also see H.C. Eastman and S. Stykolt, The Tariff and Competition in Canada, Toronto, MacMillan Co., 1967, pp. 255-277, for a review of the Canadian newsprint industry in 1958.
21. Restrictive Trade Practices Commission (RTPC), Report Concerning the Manufacture, Distribution and Sale of Paperboard Shipping Containers and Related Products, Ottawa, Queen's Printer, 1962, p. 627.
22. Ibid., p. 639. This merger is also discussed in Chapter II.
23. That dominance was clearly demonstrated in November of 1964 (see Chapter II).
24. J.S. Bain, Industrial Organization, second edition, New York, Wiley, 1968, p. 213.
25. J. Lyon, "Jack Clyne: The Great Survivor at MB," Vancouver Sun, Wed., April 28, 1976, p. 38.
26. Newman, op. cit., pp. 249-250.
27. MacMillan Bloedel, Annual Report, 1974, p. 12.
28. J. Lyon, "MB Picks President," Vancouver Sun, Sat., July 31, 1976, p. 27.
29. J.V. Clyne, Presidential Address, MacMillan Bloedel, Annual General Meeting, 1964, p. 7, as quoted in Hayter, op.cit., pp. 166-167.
30. MacMillan Bloedel, Brief Submitted to the Royal Commission on Forest Resources, Prince Rupert, September, 1975, p. 3.
31. See Chapter II of this study.
32. H.R. MacMillan, Brief Presented by H.R. MacMillan before the Royal Commission on Forestry, August, 1944, pp. 35-38. Hayter, op. cit. p. 159, comes to the same conclusion.

33. J.V. Clyne, Address to Shareholders by the Honourable J.V. Clyne, Annual General Meeting, April 19, 1973, pp. 12-13.
34. R.W. Bonner, Address to Shareholders by R.W. Bonner, Q.C., Annual General Meeting, April 19, 1974, pp. 17-18.
35. "Lack of Confidence, Communication Caused Firing of Top Executives," Vancouver Sun, Wed., April 28, 1976, p. 41.
36. J. Lyon, "MB Picks President," op. cit., p. 27.
37. H. Southam, "Forest 'Cadillac' Overhauled," Vancouver Sun, Sun., February 23, 1977, p. 36.
38. Ibid.
39. "300 Largest Industrial Corporations Outside the U.S.," Fortune, August, 1975, pp. 155-161.

forestall entry and thus competition in the industry? Our investigation indicates that the answer to both questions is "no".

By its very nature, logging is site specific. The size of plant or "establishment" is dictated by topography and forest cover. Consequently no precise or universal estimate of minimum optimal scale (MOS)⁵ exists. Very rough estimates have placed MOS of Interior logging operations at between 30 and 35 thousand cunits per annum.⁶ Knowledgeable sources put MOS of a Coastal logging operation at roughly 100 thousand cunits annually with diseconomies being encountered at about 200 thousand cunits. This estimate applies to a self-contained operation, handling the logs from stump-to-dump. The 'lumpy' inputs to such an operation would be the camp itself, sorting grounds, towers and loaders. Proximity to population centres, the existence of transportation facilities, and the characteristics of the forest itself could all lead to significant revisions of this estimate of MOS.

The diseconomies that are encountered at the 200 thousand cunit level of output are associated with the logistical problems of organizing large numbers of men and machines into crews and dispatching these crews to the day's work site. Evidently the problem is exacerbated by the union seniority system which restricts management's flexibility in assigning individuals to various tasks. Also those managing logging operations have witnessed a rapid increase in their responsibilities with the enforcement of provincial logging regulations. In the past these people had the job of getting the trees out of the woods, while presently they are called upon to ensure that the firm fulfills its resource management obligations at the harvest stage. This increase in responsibilities has necessarily reduced the size of the operation which they can effectively manage.

It is exceedingly difficult to determine how many individual logging operations the firm maintains at any given time. Some operations are isolated and run year round and are easily defined as a single plant. In other areas, however, operations share some facilities but not all. Inclement weather dictates that some areas be harvested only in the summer while fire hazard restricts other areas to winter 'shows'. With these complications in mind we estimate that the firm maintains roughly 34 separate logging operations, 14 of which are subcontracted out to independent loggers.⁷ Statistics Canada data show that in 1973 there were 648 logging 'establishments' operating in the Coastal region,⁸ although industry sources believe this to be an over-estimate. The point of this is that, in spite of both the roughness of our estimates of MOS and the heterogeneity of logging conditions, we can conclude that scale economies at the level of timber harvesting do not justify the extent of MacMillan Bloedel's holdings of timber rights, or for that matter, those of any of the integrated forest product firms.

An alternative explanation of the firm's propensity for secure cutting rights would be a corporate strategy of forestalling or constraining competition at later stages of production through the control of the primary input. To test this hypothesis, we must make a cursory review of the firm's development from

lumber exporter to tenure holder, that is, its drive for backward integration.

Now economies of vertical integration in general, and backward integration in particular, are manifold. Firstly, economies may exist due to technological complementarity. Steel production provides an example of such complementarity insofar as the combining of pig iron production, the conversion of iron into steel, and the shaping of the steel into semi-finished shapes in one plant results in considerable fuel savings as the iron and steel need not be cooled and reheated as it moves from one stage of production to another.⁹

Secondly, there may be economies of scale associated with the co-ordination of output at different steps of production. Internalizing decisions on total output and hence output at intermediate stages can obviate the need for inventories.

Thirdly, the internalizing of transactions can reduce or eliminate the costs associated with purchase-sale transactions carried out in an external market. Charges incurred in the search for a supplier, negotiations, writing of contracts, and occasionally in the enforcing of a contract through litigation are all reduced or avoided when the transaction is between divisions in a single firm.

Fourthly, there is the general class of pecuniary economies which the firm will enjoy if, through integration, it can avoid the payment of super-normal rates of profit to its suppliers. Such a situation is more likely, the more concentrated are the sellers of the input. In resource based industries the drive to obtain these pecuniary economies can be extremely strong--and they will be stronger, according to Caves:¹⁰

- a) *the fewer in number are both buyers and sellers,*
- b) *the more heavily dependent upon long-term price is the profitability of investment of both buyer and seller,*
- c) *the larger are these investments in absolute terms, and*
- d) *the fewer are the substitutes for, and the alternative uses of, the resource.*

Succinctly, the more important the resource is to the production process and the more tightly the output of the resource is controlled by others, the more desirable the resource using firm will find backward integration. If raw material production is carried out by a competitive industry there is generally little need for backward integration.

Finally, backward integration can be used to foreclose entry to later stages of the productive process. A vertically integrated firm can use its presence in all stages of production and its dominance of one or several to exert price squeezes upon its potential competitors.

Our investigation indicates that while MacMillan Bloedel might experience some savings in the synchronization of output between logging operations and wood fibre use, its backward integration into the holding of large amounts of timber cutting rights was predicated upon the desire to reap pecuniary economies, or, more accurately, to avoid pecuniary diseconomies. Its backward integration was primarily a defensive move in the face of potential control of its input by other firms.

The MacMillan Export Company (one of the predecessors of MacMillan Bloedel) started as a lumber trading company but was forced to integrate into both logging and sawmilling when its supply of lumber was threatened by the creation of Seaboard Sales Ltd., a rival sales organization which represented mills previously supplying MacMillan.¹¹ That MacMillan's strategy in integrating backwards was essentially to gain secure supplies of lumber and timber was brought out in the hearings of the Royal Commission on Forestry (the first Sloan Commission, 1944).

The Commissioner: Haven't you now succeeded, through Mr. Wellburn, and through this witness Mr. MacMillan, in proving they* bought the mill** for the primary purpose of getting the optioned limits--the mill was of no interest to them--the timber which they acquired in the two small lots was of little interest to them nor the felled and bucked timber which is still lying in the woods? What they wanted was the 285,000,000 option from the E. & N. Railway, and got it, and they closed the mill, and they are taking the logs to the White Pine mill in Vancouver. Now, it may be that these small mills should, or should not be, permitted to continue. It may be the better policy to have the large mill. That is a matter for future discussion--a problem that we have to struggle with.¹²

Much the same scenario holds for the other two founding firms, Powell River and Bloedel, Stewart and Welch.

At the time of the first Sloan Commission, MacMillan Export had acquired significant amounts of cutting rights. However, the firm still relied on the open market for nearly 30 per cent of its requirements, and therefore had a vested interest in keeping that market open. In the words of MacMillan:

Competition should be maintained throughout the Coast district amongst those who can pay the highest prices for raw material. The result of such a policy will be to encourage the best use of all the forest crop and the greatest return from growing timber.¹³as competition becomes more severe conversion units must be modernized and maintained to higher degrees of efficiency. Owners are more willing to follow this policy when confident that on equal terms (emphasis added), by buying cutting rights or buying logs,¹⁴ they have access to the product from the whole Coast forest.

* MacMillan Export

** Shawinigan Lake Lumber Company

Sustained yield was a major issue confronting this Commission (as will be discussed in Chapter III). Commissioner Sloan was attracted to the idea of giving Forest Management Licences (subsequently TFL's) to the large forest companies in return for their assumption of resource management responsibilities in the vast areas contained within those tenures. MacMillan was not so enthusiastic--"I am not throwing cold water on it but I don't find it possible to say, 'Yes, it is going to be a splendid undertaking for private venture and everybody will go into it'."¹⁵ When questioned as to the desirability of the Crown's relinquishing the provincial forests to private industry, MacMillan replied:

*I would suggest in the first place it would be impossible to get all the land capable of growing forest into the hands of the private companies; and secondly, if you were entering into an arrangement whereby the conditions were such that there was a rush of private companies to take up all the land, then it would occur to me that there was something wrong with the arrangements and that the Crown should retain some land for its own purposes.*¹⁶

The "arrangements" that the government opted for were of course the TFL's, and by 1947 the "rush" had begun with the granting of TFL Number 1. MacMillan Export and subsequently MacMillan Bloedel saw the granting of 19 TFL's in the next eight years, and the concomitant erosion of access to the raw materials on "equal terms". The firm consequently applied for, and was granted in early 1955, TFL's 20 and 21. Or in MacMillan's words:

*I will tell you what we did. We built a forty million dollar pulp mill without any F.M.L. (subsequently T.F.L.) then when we saw these applications covering the country we thought the first thing we know everybody else is going to have F.M.L.'s and we would have nothing. So we applied for an F.M.L. in which there would be 82 thousand acres of Crown forest and 64 thousand acres which include all the licences and leases that we own tributary to the Strait of Georgia including what you mention, the Lillooet, then we stated if you don't give any--we think you shouldn't give any F.M.L.'s. That is all in here. But if you proceed to give F.M.L.'s, that is to the Government and to the public, if you proceed to give them, we don't want to be the only firm without it. But we will very gladly withdraw our application, it is a statement here in very clear language that we will withdraw our application and recommend that nobody get any F.M.L.'s in that area for the reason it is over-populated and over-cut.*¹⁷

The second Sloan Commission reviewed the forestry sector in 1955. MacMillan Bloedel went into those hearings with a strong timber position, relying on external sources for less than 20 per cent of their timber requirements. By that time the TFL policy was a *fait accompli*, and the firm had benefitted from it through the addition of 338 thousand acres of hitherto unencumbered Crown Land to their holdings (424 thousand acres) to form TFL's 20 and 21.¹⁸

At issue during these hearings was the continuation of Tree Farm licensing and the carving up of the PSYU's. The firm opposed the granting of additional TFL's in the Vancouver Forest District (the district where its own holdings are most extensive) but allowed that additional licences elsewhere:

*in some instances can be granted to the advantage of the public to justify expansion of existing mills, particularly in the direction of more complete use of all wood to higher values. Such licence should be allowed only where the result is not to shorten the life of now existing market loggers and mills by allocating to selected Licensees the exclusive use of areas of Crown Forest upon which numerous loggers and sawmills are dependent now for a living.*¹⁹

With regard to PSYU's, H.R. MacMillan has argued:

*A lot of effort has been spent and time taken up during the sittings of this Commission in an effort to persuade you, Mr. Commissioner, to a conclusion that Public Timber should be parcelled out to the selected few, selected on one basis or another, but all with the sole objective that the few should survive and the many struggle in their existence until they can struggle no more and cease to trouble. To this we are unalterably opposed.....the Public Forests are public property and one citizen has just as much right as another to bring it into productivity and make money doing so if he can. The principle is as old as the French Revolution--there is nothing novel about it--there is no God-given right in any man to say who shall and who shall not enjoy the benefits of Public property. Our mines are not parcelled out in that fashion--anybody can buy a free miner's certificate and go hunting for materials if he wants to. Our fish are not managed on any such principle. Any man can get himself a fishing licence and go and catch fish where he can catch them. Why should there be some closed circle applied to the Public Forests in a District where the demand for wood is already greater than the supply? It does not make sense and no argument will make it sensible.*²⁰

Today, the parcelling up of the PSYU's is a *fait accompli*. The independent loggers, whose demise H.R. MacMillan decried, argued before the Pearse Commission in November, 1975:

*There is a serious imbalance in access to resource. Eight companies control 90 per cent of the present log supply. They hold all the Tree Farm Licences and 45 per cent of the quota in Public Sustained Yield Units, which originally were set up as a source of supply to sustain the independent operators. This imbalance is compounded by the deplorable state of management in these units²¹there is an oligopoly, which is a dangerous position for both business and Government in today's world.*²²

As with the TFL's MacMillan Bloedel has changed its attitude toward control of quota in the PSYU's. In their submissions to the Pearse Commission, they argue for the transferability of quota and for increased security of quota holding.

This then is our explanation of MacMillan Bloedel's pervasive drive for control of its own inputs. H.R. MacMillan learned early to avoid insecure sources of raw material supply and consciously sought to provide the firm's mills with a proportion of timber from its own holdings. This proportion increased as accessibility to the forest narrowed. Each time the Province sought to change the rules, MacMillan Bloedel, admittedly from a strong timber position, argued against changes which would encumber more Crown lands. When the rules did change, the firm, in the words of J.V. Clyne, "sought to accommodate itself to the new rules".²³

The current timber position of the firm, as shown in Table II.6 is unquestionably the strongest on the Coast. The cost of that accommodation by MacMillan Bloedel and the other integrated forest products firms, unintended as it may have been, was the survival of the small, independent logger.

CONDUCT

In the area of market conduct, we are primarily concerned with the "price policy" of firms in each market under study. Specifically, we are interested in the degree of interdependence manifested in the firms' determination of price when acting as either buyers or sellers. With regard to the purchase of inputs, we are thus interested in the behaviour of the firms as buyers of wood fibre under different forms of tenure.

The market for Crown Grants and OTT's can be dealt with summarily. The market does not exist. These forms of tenure are no longer granted by the Crown and only very rarely are they exchanged among the forest companies. MacMillan Bloedel's last significant acquisition of Crown Grants came with the purchase of Esquimalt and Nanaimo Railroad properties in 1964.

One can, however, speak of pricing policy in the purchase of timber originating either in "Schedule B" lands or in the PSYU's. This "market" is complex, involving as it does attempts by the Crown to capture all economic rent accruing to the timber resource. Succinctly, the stated objective of the pricing system "is to appropriate for the Crown the full net value of public timber after due allowances for necessary costs of operations and profit to the operators".²⁴ To this end, the Forest Service attempts to determine the value of harvested timber, subtracts from it operating costs (including a normal return to the logger), and appropriates the residual called "the appraised upset price".

The crucial datum in this calculation is the "value of harvested timber". In a competitive log market, value would of course be synonymous with price-- such a market however does not exist on the coast of British Columbia. For

its determination of timber value, the Forest Service relies upon prices prevailing on the Vancouver log market. The participants in this market are the very same integrated firms which control harvesting rights. As argued earlier, these firms sought these secure harvesting rights in order to avoid dependence upon any log market. Consequently, only a small proportion of logs cut on the coast enter the Vancouver log market and when the integrated firms do offer logs for sale it is due to either aberrations in the synchronization of their rate of harvest with their rate of processing, or to the cutting of types or species for which the harvesting firm has no conversion facilities. Moreover, transactions generally involve a strong degree of reciprocity--logs are sold only to firms capable of providing the seller with timber at some future time. These are not the characteristics of a competitive market.

Thus the Crown depends upon the Vancouver log market to determine the value of harvested timber for its calculation of economic rent. The 'market' in turn is comprised of the very same firms from whom the rent is to be extracted. The Task Force on Crown Timber Disposal concluded, after a detailed study of the market, that "there are strong grounds for suspecting that the prices generally underestimate the value of timber transacted".²⁵ MacMillan Bloedel, in its submission to the Pearse Commission, strongly disagrees, stating that "if there is any bias in the log market it is a tendency for prices to rise above the true value of the logs".²⁶

We are not in a position to resolve this issue. On the one hand there is no evidence of explicit collusion on the part of the integrated firms to depress sawlog prices on the Vancouver market. On the other hand these firms have the incentive and, judging from the level of buyer and seller concentration, the ability to put downward pressure on fibre prices. Whether they do in fact exercise that ability is not clear.

PERFORMANCE

The performance dimensions with which we are primarily concerned are technical efficiency, allocative efficiency, progressiveness, and, when relevant, conservation.²⁷

Technical efficiency requires that the majority of output be produced by plants and firms which are neither inefficiently large nor inefficiently small. In technical terms it requires the exploitation of all scale economies available to both the plant and the firm.

In the context of the timber industry, the "plant" is in essence the logging operation. As previously discussed, we have no definitive estimate of minimum optimal scale in logging, and as long as the forest remains heterogeneous there will be no definitive estimate. However, knowledgeable sources put the lower bound on minimum optimal scale for a self contained logging operation on the Coast at roughly 100 thousand cunits per annum. These same sources believe that serious diseconomies of scale are encountered when the operation exceeds 200 thousand cunit capacity. The bulk of

MacMillan Bloedel's own logging operations fall within the efficient range. Recently the firm has effected disaggregation of some of its largest units, especially those in the Alberni. Two of the remaining large operations, Kelsey Bay and the Queen Charlotte Islands with capacities of 270 and 229 thousand cunits/annum respectively, are in the process of being disintegrated. The Chemainus operation with an annual capacity of 220 thousand cunits is under study.

There are however a large number of smaller operators logging on the Coast, some of which work under contract for MacMillan Bloedel. Seemingly these small operators conform to what Bain has labelled the "inefficient fringe".²⁸ These suboptimal units can continue to exist because efficiency is not the only factor influencing profitability. It has been suggested that these smaller firms enjoy more flexibility in their relations with their work force, that they can avoid training costs by hiring away from the larger firms, and that they are able to circumvent costly Forest Service regulations on logging practices. It has even been argued that the Forest Service has given preferential treatment to the small operators when enforcing these regulations.

Allocative efficiency refers to the proximity of price to marginal cost when the firm acts as a seller, and the proximity of price to marginal resource cost when acting as a buyer. Persistent super-normal profits are taken to be evidence of allocative inefficiency. Timber, however, in the short run, is in fixed supply, and hence price is determined by demand. If demand is low relative to this fixed supply, as was true in British Columbia at the turn of the century, timber is nearly a free good. Today wood of course does have a positive value and the relevant question is who, the firms or the Crown, captures the rent associated with resource exploitation? Now if stumpage fees approximated the difference between market value of the timber and the cost of harvesting there would be little value attached to harvesting rights.²⁹ In reality these rights command substantial prices when traded amongst private firms and thus we conclude that the Crown is not appropriating all the rent associated with the timber harvest.

Leaving aside the question of progressiveness for the time being, we turn to the most important performance dimension of this timber market--conservation. An extensive evaluation of MacMillan Bloedel's role as resource manager is provided in Chapter III. However, we should note here that concentration of private control of timber on the Coast is, in part, a result of the Crown's abdication of responsibility for forest management. It should also be noted that conservation policies are more conscientiously applied in the privately managed forests than in those managed by the Crown.³⁰ Whether the level of concentration is justified by the quality of forest management is not, and perhaps cannot be, known.

Table II.1
AREA AND TIMBER HARVEST BY TENURE CATEGORY

TYPE	AREA		HARVEST	
	thousands of acres	percentage	thousands of cunits	percentage
Crown Grants	6,326.1	4.7	3,648.8	14.73
OTT	1,778.2	1.3	3,869.3	15.62
TFL (Sch. B)	8,986.8	6.7	3,953.2	15.96
PSYU	79,509.1	59.3	12,433.8	50.20
Other*	37,512.0	28.0	863.3	3.49
TOTAL	134,112.2	100.0	24,768.4	100.00

* Includes: Federal Land, Christmas Tree Licences, minor forms of licence, Reserved Lands, Provincial Crown Land outside PSYU.

Source: Task Force on Crown Timber Disposal, Victoria, B.C., December, 1974, Tables 4 and 5.

Table II.2

COMMITTED ANNUAL ALLOWABLE CUT BY FIRM IN COAST REGION - PSYU'S

1975

	M Cunits	Percentage
B.C. Forest Products	490.7	17.0
Bay Forest Products	246.4	8.5
Weldwood	233.4	8.1
Tahsis	216.0	7.5
Canadian Forest Products	138.8	4.8
Crown Zellerbach	115.4	4.0
MacMillan Bloedel	93.3	3.2
B.C. Cellulose	82.2	2.8
Rayonier	44.1	1.5
Others	1,232.8	42.6
TOTAL	2,893.1	100.0

Source: P. Pearse, Timber Rights and Forest Policy in British Columbia, Vol. 1, Victoria, 1976, p. 39.

Table II.3

TIMBER POSITIONS IN THE COASTAL TFL'S BY CUT AND AREA

1975

	AAC thousands of cunits	percentage	Crown Lands thousands of acres	percentage	Crown Grants & OTT's thousands of acres	percentage	TOTAL thousands of acres	percentage
MacMillan								
Bloedel	2,670.0	41.5	1,483.9	22.7	749.0	55.6	2,232.9	28.4
Rayonier	859.4	13.4	730.4	11.2	181.6	13.5	912.0	11.6
B.C. Cellulose	720.0	11.2	2,288.0	35.1	15.1	1.1	2,303.1	29.3
B.C. Forest Products	508.1	7.9	485.2	7.4	67.5	5.0	552.6	7.0
Crown								
Zellerbach	485.7	7.6	299.3	4.6	204.2	15.2	503.5	6.4
Canadian Forest Products	404.0	6.3	229.7	3.5	103.6	7.7	333.3	4.2
Eurocan	312.0	4.9	509.5	7.8			509.5	6.5
Tahsis	302.0	4.7	257.7	3.9	21.8	1.6	279.5	3.6
Weldwood	157.0	2.4	228.0	3.5	1.1	.1	229.1	2.9
Mission Munic.	11.4	.2	13.3	.2	2.9	.2	16.2	.2
TOTAL	6,429.6	100.0	6,525.0	100.0	1,346.8	100.0	7,871.7	100.0

Source: Government of British Columbia, Forest Service, Annual Report 1975, Statistics, Table 8.

Table II.4

HOLDINGS OF OLD TEMPORARY TENURES OUTSIDE
TFL'S, RANKED BY ACREAGE, TOTAL B.C.

	M Acres	Percentage
Crown Zellerbach	206.0	26.8
MacMillan Bloedel	178.0	23.2
Canadian Forest Products	52.3	6.8
B.C. Forest Products	46.2	6.0
Weldwood	32.8	4.3
Evans Products	28.6	3.7
Tahsis	27.5	3.6
Weyerhauser	28.6	3.7
Pacific Logging	25.4	3.3
Federated Co-operatives	16.2	2.1
Rayonier	28.7	3.7
Northwood Pulp & Timber	10.5	1.4
Other	86.0	11.2
TOTAL	768.1	100.0

P. Pearse, Timber Rights and Forest Policy in British Columbia,
Vol. 1, Victoria, 1976, p. 42.

Table II.5

CROWN GRANTED LAND OUTSIDE* TFL'S

TOTAL B.C. - 1976

	M Acres	Percentage
MacMillan Bloedel	487.0	24.8
Pacific Logging	300.4	15.3
Crows Nest Industries	245.4	12.5
Crown Zellerbach	158.2	8.0
Darkwoods Forestry	139.3	7.1
B.C. Forest Products	87.5	4.4
Scott Paper	84.7	4.3
Rayonier	47.8	2.4
Weldwood	42.7	2.2
Crestbrook	35.6	1.8
Northwood	7.8	0.4
Weyerhauser	4.6	0.2
B.C. Cellulose	4.2	0.2
Canadian Forest Products	3.5	0.2
Pope & Talbot	3.4	0.2
Clearwater Timber	3.0	0.2
Triangle Pacific	.7	neg.
Tahsis	.3	neg.
Others (approximately)	311.0	15.8
TOTAL (approximately)	1,967.1	

* Unregulated or in Taxation Tree Farms

Source: P. Pearse, Timber Rights and Forest Policy in British Columbia,
Vol. 1, Victoria, 1976, p. 42.

Table II.6

TIMBER POSITIONS IN THE COASTAL REGION BY BILLED CUT - 1974
(M Cunits)

	PSYU	TFL	GRANTS & OTT'S OUTSIDE TFL'S	TOTAL	% OF REGION TOTAL
MacMillan Bloedel	62.1	2,106.4	878.2	3,046.7	30.9
B.C. Forest Products	300.4	465.6	174.4	940.4	9.6
Rayonier	34.3	710.0	44.0	788.3	8.0
Crown Zellerbach	63.8	239.7	488.1	791.6	8.0
Tahsis	126.0	286.2	133.5	545.7	5.5
Canadian Forest Products Limited	105.7	348.8	67.2	521.7	5.3
Weldwood	212.8	85.1	94.5	392.4	4.0
Bay Forest Products	211.0	-	2.7	213.7	2.2
Eurocan	-	140.6	-	140.6	1.4
B.C. Cellulose	24.4	110.7	-	135.1	1.4
Other	978.0	12.6	1,337.7	2,328.3	23.7
TOTAL	2,118.5	4,505.7	3,220.3	9,844.5	100.0

Source: P. Pearse, Timber Rights and Forest Policy in British Columbia, Vol. 1, Victoria, 1976, p. 39.

LUMBER

In strict theoretical terms the "softwood lumber industry" is actually a composite of a number of true industries the outputs of which are substitutable to varying degrees. For example, Hemlock and Fir have similar applications while Western Red Cedar has qualities which set it apart from other species. The degree of processing (e.g., green versus kiln-dried), the grade, and the dimension of the lumber all differentiate the product in the eyes of the consumer. The extent of this differentiation is indicated by the extreme differences in market prices (commercial grade hemfir studding has recently sold at around \$120 per thousand fbm while kiln-dried clear cedar paneling fetched ten times that amount). Nevertheless, we will treat "lumber" as a single product.

British Columbia sawmills operate as buyers in the Coast timber market and as sellers of lumber in both international and, due to transportation costs and product variation, regional markets. The nature of the Coast timber market has already been discussed, the markets for lumber in which British Columbia mills are active are indicated in Table II.7, page 60. The data show that the United States is by far the major customer taking between 40 and 54 per cent of the Coast output. Canada, the United Kingdom, and Japan account for the majority of the remainder.

Table II.7 also shows the extreme volatility of the lumber market with output in 1975 only 60 per cent of 1972 production. Mainly, this severe curtailment was due to an extended strike in all B.C. coastal operations. At the same time, housing starts in the United States were at a low level, resulting in reduced demand for lumber and accentuating the cyclical fluctuation in the industry. These exaggerated swings in supply and demand give to the sawmilling industry "boom or bust" characteristics which, argue the large firms, have been instrumental in the decline of the small mills unable to survive the troughs.

STRUCTURE

The structure of the coastal sawmilling industry is a reflection of the concentration of timber holdings. In 1974 the largest six groups controlled 48 per cent of sawmilling capacity while the largest of these, MacMillan Bloedel, held nearly 18 per cent (see Table II.8). Capacity ratings, however, are subject to some question as they measure possibilities rather than realities. Based upon 1974 production, MacMillan Bloedel's share was 27.8 per cent of coastal output with the top six firms controlling 62.2 per cent. Over the past five years, which contain both boom and slump, MacMillan Bloedel has consistently produced roughly 30 per cent of Coast lumber output (see Table II.9), which is about equivalent to its timber position (see Table II.6) on the Coast.

Concentration is high in coastal sawmilling and has been increasing over the past three decades. There are two possible explanations for this situation

and this trend. First, technological change may have increased minimum optimal scale in sawmilling to such a degree that the Coast forest will only support a handful of firms. Or, alternatively, sawmilling may have simply represented a step in the integrated firms' backward drive for secure timber rights. We will explore each explanation in turn.

In contrast to logging, efficient scale in sawmilling has been the object of a number of both academic and industrial studies. The results of several of these are summarized in Table II.10.

Engineers involved with mill design speak in terms of capacity per line, where a line is made up of a set of component machines including headrig, edgers, trim saws and planers. A plant in turn may consist of one or several lines, a fact which leads to some confusion when reviewing published estimates of minimum optimal scale, especially those developed using the survivor technique.³¹ The problem, simply put, is that a plant with a given capacity may be comprised of one highly efficient production line or a number of inefficiently small lines. This caveat applies with regard to the following discussion.

The estimates arranged in Table II.10, based upon different years, different geographic areas, and different estimation procedures, exhibit some degree of similarity. Minimum optimal scale in sawmilling evidently lies somewhere between 80 and 120 thousand fbm per eight hour shift. There is no strong evidence of diseconomies of large scale at the level of the plant.

This implies that MacMillan Bloedel's sawmills (see Table II.8) are, with the exception of the Queensborough unit, at or above minimum optimal scale. A simplistic division of total capacity by the lower bound estimate of minimum optimal scale implies that the firm's sawmilling capacity could be divided into 24 units with no loss in efficiency (assuming of course no scale economies of multiplant operation).

The evidence thus contradicts the proposition that concentration in sawmilling on the coast is dictated by existing technology. More plausible is the argument that sawmilling is simply a stage between harvesting and marketing; that MacMillan Bloedel began in marketing, and moved, for previously discussed reasons, into the harvesting of timber; and that the intermediate stage was absorbed in the process.

Such then is the structure on the production side of the market. Concentration is high and will remain so as long as access to cutting rights remains the formidable barrier to entry which it is today.

As a seller of lumber, the firm's position in most of the markets in which it operates is of significantly less importance.

Table II.11 shows the destination of both British Columbia's and MacMillan Bloedel's international shipments. The United States is the major

customer of both firm and province. The province ships 73 per cent of its exports south of the border, but the firm ships only 39 per cent because, like other Coast producers, it has the ability to serve a wider range of overseas markets than producers in the Interior of the province.

While we have eschewed the Herculean task of calculating MacMillan Bloedel's share of each regional market to which it exports, some notion of its relative importance in foreign markets can be gleaned from Table II.12. The firm is of importance in the Australian market; elsewhere it has a very small market share.

Within Canada, MacMillan Bloedel's market share is relatively small being somewhere around 3 to 4 per cent of domestic consumption. At the provincial level casual evidence indicates that despite its size the firm does not exert market power. The British Columbia market for lumber is small and while concentration in sawmilling is high, there is a proliferation of minor operators who are relatively small but whose output represents a significant portion of provincial consumption. These fringe firms do not have the same facility of access to export or national markets and consequently cater to local buyers. Anecdotal evidence supports this. In conversation, an employee of MacMillan Bloedel related that while building his home he had the opportunity of buying lumber from the firm at wholesale. However, a neighbour had a cousin who had a portable mill and, "In the end I bought from my friend's cousin--the price was right".

CONDUCT

Representatives of the firm contend that it is essentially a price taker with regard to lumber. The contention is supported by the work of other investigators.

The majority of the province's, and a significant proportion of MacMillan Bloedel's output goes to the U.S. market which is characterized by vigorous competition.

None of the approximately 1,000 forest products companies in Canada represents alone more than 10 per cent of total Canadian sales or 3 per cent of total United States consumption. For this reason, Canadian exporters of forest products are "price-takers" in the fullest sense; each producer is facing an elastic demand and sells at the prevailing market price without ability to set it. Canada sells forest products in more than 35 countries and the prevailing price is world market price influenced by the demand in all these countries.³²

Lumber prices are market determined. The individual firm demand curve is horizontal.....No evidence has been found of predatory acts in the lumber market.³³

At one point MacMillan Bloedel confronted market power on the buyer's side on the U.S. Atlantic Seaboard. Upon the arrival of MacMillan Bloedel's large lumber freighters, wholesalers depressed prices knowing that the firm had no warehousing facilities. In response, MacMillan Bloedel eventually chose to invest in holding and distribution facilities in the area.

Vulnerability in world markets has led to the creation of export organizations amongst B.C. producers. Currently, four organizations, Seaboard Lumber Sales Ltd., MacMillan Bloedel, Northwood Building Materials, and Eacom Timber Sales, Ltd., account for nearly all waterborne exports from the province. In 1974 MacMillan Bloedel handled 39 per cent³⁴ of all waterborne shipments which included its own production and that of British Columbia Forest Products and Triangle Pacific (together representing 20 per cent of MacMillan Bloedel's waterborne shipments).

Within Canada the firm sells via its own distributors and directly to a number of buying groups representing smaller retail yards (these groups will be discussed more fully in our analysis of the domestic plywood market).

PERFORMANCE

The evidence already presented indicates that in terms of size the sawmilling capacity of MacMillan Bloedel is technically efficient. Drawing from Table II.8 and assuming minimum optimal scale at 80 M fbm per eight hour shift leads to the conclusion that only the Queensborough plant is below scale. This however is misleading. The Queensborough mill is in fact an attempt by the firm to test the feasibility of setting up a specialized installation to handle cedar logs which are either too small or of too low a grade to be handled effectively in one of the larger units.

Another aspect of technical efficiency relates total capacity to aggregate demand. Ideally the firm and the industry should neither maintain excessive redundant capacity nor should they persistently overtax their capital stock. While there is no precise measure of ideal capacity utilization we will accept as 'efficient' a capacity capable of satisfying peak demand even though this will result in some excess capacity in normal or slack periods.³⁵ In this sense MacMillan Bloedel's lumber mills seem reasonably efficient as over the 1970-74 period total output represented, on the average, 87 per cent of rated capacity.

Those familiar with the industry will recognize our criterion for technical efficiency as both arbitrary and narrow. A critical dimension neglected by the minimum optimal scale measure is the ability of the mill to extract maximum value from the log input. Maximum value utilization in turn refers to the mill's sophistication in cutting any given log into the most valuable dimensions. While electronic scanning devices are being developed for this purpose, it is still primarily the skill of the sawyer which determines accuracy of cut. Also of importance is the mill's capacity to minimize and to use what heretofore have been waste residuals. Sawdust and chips, at one

time disposed of in the picturesque "bee-hive" burners which dotted milling regions, serve now as both raw material and fuel for pulp mills. Increasing log costs and government requirements of close utilization(i.e., harvesting of the majority of timber, both high and low quality, in a given area) have forced the mills to pay close attention to the extraction of maximum value from their wood fibre.

There is no definite standard for efficiency in utilization. We must be satisfied with causal evidence which indicates that MacMillan Bloedel has, over the past twenty years, installed a considerable amount of equipment to both reduce residuals and to turn them into a form available for other uses. These installations are arrayed in Table II.13.

The question of allocative efficiency, which refers to the relationship between price and marginal cost, remains unanswered due to unavailability of appropriate data. Unfortunately this will be the case in each of the industry studies.

Summary

While lumber production is highly concentrated on the British Columbia coast, the large firms, including MacMillan Bloedel, have little power in the markets in which they sell.

The level of technical efficiency of the firm's mills appears reasonable according to our admittedly imperfect measure. No estimate of allocative efficiency can be made due to unavailability of data.

Table II.7

LUMBER SHIPMENTS BY MACMILLAN BLOODEL AND ALL COAST MILLS - BY VOLUME

Destination	1970			1972			1975			
	COAST*	MB**	COAST*	MB**	COAST*	MB**	COAST*	MB**	COAST*	
	million fbm	%	million fbm	%	million fbm	%	million fbm	%	million fbm	
Canada	602	15.7	136	11.4	809	19.1	176	14.7	713	27.9
U.S.	1,162	30.2			1,629	38.4	603	23.6		
ships/Atlantic ships/West Cst. rail & truck	45	1.2			73	1.7	5	.2		
	374	9.7			588	13.9	417	16.3		
TOTAL U.S.	1,581	41.1	479	40.0	2,290	54.0	631	52.6	1,025	40.1
U.K.	452	11.8	101	8.5	348	8.2	83	6.9	127	5.0
Other European countries	205	5.3	72	6.1	134	3.2	62	5.2	165	6.5
Japan	699	18.2	323	27.2	375	8.8	158	13.2	307	12.0
Australia	150	3.9	46	3.9	137	3.2	44	3.7	60	2.3
Other	157	4.1	31	2.6	148	3.5	45	3.7	159	6.2
TOTAL	3,846		1,188		4,241		1,199		2,556	

Source: * Council of Forest Industries, Annual Report 1975, page 5.
** MacMillan Bloedel.

Table II.8

CONCENTRATION OF SAWMILLING CAPACITY & PRODUCTION - COAST REGION

1974

	CAPACITY thousand fbm/shift	%	PRODUCTION million fbm	%
MacMillan Bloedel*				
a. Alberni Pacific	285		138	
b. Port Alberni, Somass	440		209	
c. White Pine	350		193	
d. Chemainus	350		160	
e. Harmac #3	200		121	
f. Harmac #4	130			
g. Powell River	90		62	
h. New Westminster	130		58	
i. Queensborough	20		4	
Total	1,975	17.8	945	27.8
British Columbia Forest Products**	975	8.8	316	9.3
Crown Zellerbach**	659	6.0	235	6.9
Weldwood**	635	5.7	193	5.7
Canadian Forest Products**	550	5.0	152	4.5
Rayonier**	545	4.9	272	8.0
Largest 6 Firms	5,339	48.2	2,113	62.2
TOTAL COAST	11,059		3,405	

Source: * MacMillan Bloedel.

** Royal Commission of Forest Resources, preliminary work of G. Bowden, and miscellaneous annual reports, and "Mills in Canada," Forest Industries, May 30, 1975.

Table II.9

LUMBER PRODUCTION

	COAST *	MACMILLAN BLOEDEL**	MACMILLAN BLOEDEL
	millions of fbm	millions of fbm	percentage of coast
1970	3,787	1,135	30.0
1971	4,220	1,302	30.9
1972	4,028	1,202	29.8
1973	4,403	1,226	27.8
1974	3,405	945	27.8
1975	2,500	705	28.2

Source: * Council of Forest Industries of B.C. Annual Report, 1975.

** MacMillan Bloedel .

Table II.10
MINIMUM OPTIMAL SCALE - SAWMILLING

From M fbm/8 hr. shift	To shift	Disconomies of scale	Method	Year of Data	Region
80	120	? ¹	questionnaire opinions correspondence	1963	Western U.S. ^a
80	119	?	survivor	1951-61	Pacific Northwest ^b
80	119 ²	yes	survivor ³	1952-62	Pacific Northwest ^c
51	100	no	survivor	1955-71	B.C. ^d
60-70	?	?	engineering estimate	1976	B.C. ^e
30	40	?	?	1972	Southeast U.S. ^f
80 ⁴	90	none up to 250 ⁵	engineering estimate	1976	B.C. ^g
100	?	?	engineering estimate	1966	B.C. ^h
106 ⁶	280 ⁴	?	engineering estimate	1973	B.C. Coast ⁱ

1. noted "...there is evidence of a trend away from both large and small mills..." p. 22.

2. "or perhaps to 140 M fbm," p. 15, no evidence of multi-plant economies, p. 25.

3. Mead also interviewed three engineers: results 50-80 m; 60-75 m; 60-85 m; p. 20.

4. Refers to one production line.

5. Based upon the one line operation of Rayonier, at Marpole, B.C.

6. Refers to single line small log dimension mill.

7. Refers to triple line (large, small and intermediate logs) dimension mill.

SOURCES: a. Zaremba, J., Economies of American Lumber Industry, Speller, N.Y. 1960.

b. Fedkiw, J., "Forest industry capacity, production and available log supplies in the Douglas-fir subregion," U.S. Forest Service, Research Paper, PNW11, 1964.

c. Mead, W.J., Competition and Oligopsony in the Douglas-Fir Lumber Industry, University of California, Los Angeles, 1966.

d. Dobie, J., "Economies of Scale and Trends in B.C.," The Forestry Chronicle, April 1, 1973.

e. Interview, Vancouver engineering firm, 1976.

Sources: (cont'd)

- f. Buford, J.A., Jr., "Some aspects of competition in the southern pine lumber industry of Alabama, 1967-1972." Unpublished Ph.D. dissertation, University of Georgia, Athens, Georgia.
- g. Interview, Vancouver engineering firm, 1976.
- h. Nagle, G., "Economics and Public Policy in the Forestry Sector of B.C." Unpublished Ph.D. thesis, Yale University, 1970.
- i. Phillips, Barratt, Hillier, Jones and Partners, "General Report on the Economics of Commercially Viable Sawmills in the Province of British Columbia," mimeo, Vancouver, June 1973.

Table II.11

EXPORTS OF SOFTWOOD LUMBER - BY VALUE

1975

	B.C. EXPORTS *	% of \$000,000	MB EXPORTS **	% OF \$000,000
U.K.	46.1	5.9	6.2	6.4
Continent	30.6	3.9	8.3	8.6
Japan	88.0	11.3	27.4	28.5
Australia	15.1	1.9	4.9	5.1
U.S.	569.1	73.0	37.8	39.3
West	63.1	8.2		
Northeast	123.5	15.8		
Midwest	222.4	28.5		
Other	160.1	20.5		
Other	31.2	4.0	11.6	12.1
TOTAL	780.1	100.0	96.2	100.0

Source: * Statistics Canada, Exports by Countries, Jan. - Dec. 1975, Catalogue 65-003.

** MacMillan Bloedel.

Table II.12

MACMILLAN BLOEDEL'S SHARE OF ITS
PRINCIPAL EXPORT MARKETS

1974

	Consumption (billions fbm)	MB Exports (billions fbm)	MB as % of consumption
United Kingdom	3.8	.06	2.0
Continental Europe	36.8	.06	.2
Japan	15.2	.18	1.2
Australia	.7	.05	7.1
United States	29.3	.414	1.4

Source: Consumption data from Council of Forest Industries;
MacMillan Bloedel export data from MacMillan Bloedel.

Table II .13

INSTALLATION OF EQUIPMENT TO REDUCE RESIDUAL WASTE
1951-75

Somass Sawmill, Port Alberni

1951 Start-up of 'B' mill to facilitate efficient production from small diameter logs.

1959 New hydraulic barker installation.

1965 Sawdust recovery system to provide more fibre for pulp mill.

1967 Installation of a new gang saw line.

1971 Addition of 'B' mill Chip N Saw Machine as a primary production unit for converting small logs into lumber and pulp chips with reduced small kerf.

Alberni Pacific Lumber Mill, Port Alberni

1967 Start-up of a floating barker to permit better fibre utilization.

Chemainus Sawmill, Chemainus

1951 Start-up of a hydraulic barker system.

1952 Installation of a new waste wood chipper system for increased pulp chip recovery and higher chip production per man.

1958 All three headrigs converted to self setting units.

1961 Installation of a mechanical barker.

1968- Installation of chipper heads on headrigs and main edger.

1969

1971 Start-up of a new hog fuel production unit.

1973- Replacement of No. 1 & No. 2 band mills and installation of twin band edger.

1974

Canadian White Pine Sawmill, Vancouver

- 1953 New hydraulic barker and waste wood recovery room for increased fibre recovery.
- 1966 Major revision to 'C' mill including new lumber conveyor and trimmer system.
- 1970 Installation of bark press to make more efficient fuel for boiler house.
- 1975 Installation of mechanical barker in 'C' mill.

Source: MacMillan Bloedel.

PLYWOOD

The plywood industry is far more amenable to economic analysis than either timber or lumber. The product is well defined, with manufacturers adhering to standards established by the Canadian Standards Association. The bulk of plywood production is in 4' x 8' sheets ranging from $\frac{1}{8}$ " to $1\frac{1}{2}$ " in thickness. A distinction is made in the industry between commodity and specialty boards, the former accounting for 90 per cent of output or more.

Commodity plywood is used extensively in construction and to a lesser degree in furniture, cabinet and shelving manufacture. Specialty boards find application as decorative interior and exterior paneling and, when appropriately treated, as reusable concrete forming.

As of late the plywood product class has experienced considerable competition from substitute products such as waferboard, hardboard, particle board, and other composition board.

The demand for plywood is closely tied to residential construction as more than a quarter of domestic consumption is used in housing. It is consequently subject to both seasonal and cyclical fluctuations and is thus similar to lumber demand in this respect.

Up to the early 1970's Canadian consumption of plywood was supplied nearly exclusively by Canadian producers. A 15 per cent tariff on the commodity effectively curtailed importation from the United States. However this situation has changed (see Table II.14, page 75). Beginning in 1971 with nine-tenths of one per cent of domestic consumption, imports increased their share to 5 per cent in 1973, 18 per cent in 1974 and nearly 23 per cent in 1975. This incursion, which originated primarily from the United States is explained by increasing costs in Canada relative to the United States, and by excess supply in that country. Industry representatives see no cessation of this trend in the near future.

British Columbia had and continues to have the majority of the Canadian market, although this share declined from over 90 per cent in 1967 to 65 per cent in 1975 (see Table II.14).

The province is also the major producer and exporter of plywood although its position in production has also been slipping over the last several years. The bulk of provincial exports are destined for the United Kingdom, which takes between 60 and 80 per cent of total exports.

STRUCTURE

Concentration of plywood production in British Columbia is high, with the five largest producers accounting for nearly three-quarters of provincial output (see Table II.15). This ratio has increased by four percentage points over the last decade and during this time period Weldwood displaced MacMillan Bloedel as the largest producer. These two industry leaders have consistently held about 40 per cent of provincial output.

Again we must ask if this level of concentration is justified by the existence of scale economies at the level of the plant. Published minimum optimal scale estimates are both few and subject to some skepticism. Guthrie

and Armstrong³⁶ using the survivor technique for the 1955-60 period, conclude that their data "seem to indicate" that minimum optimal scale ranges between 30 and 80 million square feet (3/8" basis) per annum. Crown Zellerbach states that "an economic size of mill in 1975 on the British Columbia Coast would be about 80 million square feet (3/8") minimum per annum".³⁷ Representatives of both MacMillan Bloedel and Weldwood put the minimum at 100 million square feet (3/8") per year.

Using the 80 million estimate it follows that provincial production in 1974 would have theoretically supported 22 mills of efficient size. Assuming no multiplant firms, this would imply concentration ratios of 9%/2 and 22%/5 rather than the observed ratios of 38.5%/2 and 74%/5. Evidently the existing technology neither explains nor justifies the degree of concentration in production.

Rather, concentration in production is explained and maintained by barriers to access to the wood input, as was the case in lumber production. Plywood manufacturing is simply a stage in the process between harvest and final marketing and thus falls to those holding positions at both ends of the process.

Turning now to seller concentration in the national market, we note from Table II.16 that the largest four British Columbia based firms hold more than half of the national market even when adjustments are made for imports from the United States and exports from the provinces. Indeed, these calculations performed for 1974, when imports held less than one per cent of the market, yield a concentration ratio of 62%/4.

As high as this 1974 ratio is, it is an understatement of true seller concentration because two of these firms act as selling agents for smaller manufacturers in the industry. MacMillan Bloedel has for many years acted as the domestic sales agent for the Victoria plant of British Columbia Forest Products, while Canadian Forest Products has maintained a similar liaison with Victoria Mills and Crestbrook Forest Industries. Also Crown Zellerbach purchases for resale roughly 20 per cent of British Columbia Forest Products' Delta Mill's output. The recognition of these groups raises effective seller concentration to 66%/4 (see Table II.17) which qualifies the market as oligopolistic on the sellers' side.

On the buyers' side of the market are found buying groups, independent and captive wholesalers, independent and captive retailers, industrial customers and contractors large enough to deal in carlots.

The buying groups represent retailers who, according to one of their purchasing agents, combined principally for the purpose of self defence. Confronted with tight oligopolies in a number of the product markets in which they buy, they attempt through collective purchasing to exert oligopsony power. Heretofore they have been unsuccessful in this regard with respect to the plywood market. For example, six of these groups account for approximately 24 per cent, and no one of them for more than 10 per cent, of MacMillan Bloedel's total Canadian sales of softwood plywood.

Each of the four major firms has extensive captive wholesaling systems.

MacMillan Bloedel has 33 outlets; Canadian Forest Products, 28; Weldwood, 26; and Crown Zellerbach, 7. These outlets account for roughly 27 per cent of MacMillan Bloedel's sales and 30 per cent of Crown Zellerbach's. Only Crown Zellerbach is integrated forward into retailing, with 35 retail outlets, and these, according to the firm, account for less than 5 per cent of their Canadian sales.³⁸

Evidently a potential entrant to the plywood industry would confront significant barriers in the acquisition of quality timber (i.e., peeler logs). This, in combination with the capital requirements of mill construction, does not augur well for entry into the industry by any but the very large. Recently, Georgia Pacific, fourth largest forest products firm in the United States with assets twice MacMillan Bloedel's, overcame these barriers and constructed a 120 million square feet per annum capacity mill in the Maritimes.

CONDUCT

Theory predicts that in a tight oligopoly, as is the plywood industry, a good deal of interdependence in pricing policy will be recognized by the major firms. Recognized interdependence can of course be manifested in a number of ways, ranging from pure cartelization to "conscious parallelism".

A decade ago another researcher found,

...the evidence of a kind of 'price leadership'. Executives for companies II, III and IV (Western Plywood, Canadian Forest Products, Crown Zellerbach) agreed that company I (MacMillan Bloedel) had established the prices for the industry and that they and other plywood firms have tended to follow that leadership'.³⁹

Because of the erosion of MacMillan Bloedel's market share from 35.6 per cent in 1963⁴⁰ to 15.2 per cent in 1974 we find it unlikely that they could maintain the leadership role. Others in the industry agree. According to representatives of two of the other major firms, MacMillan Bloedel has consciously allowed its position in plywood to deteriorate. This deterioration was accelerated by the rapid expansion of the industry in the Interior Region of British Columbia--an expansion in which MacMillan Bloedel did not share. Today the leadership role is probably⁴¹ held by Weldwood, but is weaker than the leadership once exercised by MacMillan Bloedel.

Characteristic of oligopolistic pricing models is relative price stability, a symptom of the Canadian plywood market. Ten years ago Bessom found,

According to executives in all four firms, plywood prices in Canada have been subject to less fluctuation than those in the United States; a condition of 'price leadership' has prevailed; and individual firms have tended, in the long run, to price at the market price established by the leader.⁴²

While the leadership position may have shifted, the outcome is similar.

True and beneficial competition cannot exist when an industry is dominated by only a few large corporations. A mixture of many small and several large corporations is required to foster true competition. An example of this can be secured by comparing the softwood plywood industries of Canada and the U.S. In Canada four large corporations basically control the supply of this product. In the U.S. the softwood plywood industry is made up of more than one hundred small supplying companies and very little control is exercised by large corporations. In fact the U.S. industry has been quoted by responsible economists as being an example of near true competition, where product prices vary from day to day under the direct influence of the market. In Canada prices are very much more stable and in our opinion this may be one of the reasons why Canadian production costs and selling prices are higher than for the equivalent U.S. products.⁴³

There is no question that regardless of concentration and price leadership, the Canadian manufacturers of plywood are severely constrained in their pricing policy by the ever present threat of increased American imports. The 15 per cent tariff on plywood puts a limit on the abuse of market power. The buying association agrees. "In fact their main and possibly most effective competition seems to come from foreign producers."⁴⁴

The large integrated plywood manufacturers are, by virtue of their positions in both manufacturing and distribution, in a position to exert a price squeeze on non-integrated firms at either end of the spectrum. One of the above-mentioned buying groups believes that it experienced such a squeeze and likens its position to that of a small gasoline station.

The small independent building products distributor, as an example, feels that the large integrated companies in the wood-product business often decide to create high profit centres for certain large volume commodity type items at the manufacturing level and low profit centres at the distribution level. The members of the National Association have been likened in many respects to the small independent gasoline distributors who both buy gasoline from, and who sell in competition to, the large primary integrated oil products corporations. It is our understanding that these small independently owned gasoline enterprises, who it would seem are the instigators of most of the competition at the retail gasoline sales level, are actually faced with some of the problems that we have described. That is, they are often forced to purchase gasoline products at relatively high prices and then meet competition established by the same supplying companies at relatively low prices at the selling level. It is also our understanding that the large integrated oil companies are reported to secure a large part of their profits from their primary manufacturing levels, where the number of competitors is small, and that the profitability of their distribution and selling divisions is marginal. If this is

so and it is our belief that it is, then this would seem to be a very satisfactory method of limiting or restricting the growth of small enterprises in that section of the oil industry where the existence of many small enterprises fosters true and beneficial competition i.e. at the gas pump service station level.⁴⁵

It should be noted, emphatically, that this remains a "feeling" on the part of the buying group. No hard evidence is offered to substantiate the claim.

A vertically integrated firm is, theoretically, also in a position to deny supply to its competitors at the distribution level. The above quoted buying group alleges that this has occurred in the plywood market.

The control which the four corporations exert on both the production and distribution of board products in Canada is considerable. For instance they control more than 80% of the total softwood plywood production. This control is such that it is often difficult for the small distributors, who must compete with the four large corporations, to purchase sufficient supplies of Canadian softwood plywood to meet their market requirements.⁴⁶

In response to this allegation representatives of MacMillan Bloedel point out that over the last two and a half years there has been no shortage of plywood and that small buying groups have relied heavily on cheaper U.S. imports. In previous "hot" markets all distributors, large and small, integrated and un-integrated, suffered shortages. In no instance, they assert, were small distributors discriminated against for the purpose of driving them from the market.

In summary, conduct within the industry does not seem to conform to the competitive ideal. There is strong evidence of price leadership and allegations, by an admittedly interested party, of price squeezing and refusal to sell. While MacMillan Bloedel contends that "this is a competitive market"⁴⁷ the National Association of Independent Building Materials' Distributors has "expressed an opinion that true competition is not generally practised when only a very few large corporations effectively control markets...and wood board products (is an) example".⁴⁸ Certainly the structure of the industry and the evidence of price leadership support the latter view. However the allegations of predatory practices on the part of the producers deserve considerable investigation before being accepted as fact.

PERFORMANCE

As noted above, estimates of minimum optimal scale of plant range from 80 to 100 million square feet (3/8") per annum. According to this superficial criterion MacMillan Bloedel's mills are significantly above scale with the Alberni operation having an annual capacity of 181.5 million square feet (3/8") and Vancouver with 225 million square feet (3/8"). This, however, is misleading. Both of these mills are over 30 years old and are really agglomerations of equipment added and modified over a quarter of a century. The last major renovation of the Alberni plant was completed in 1964 and since completion of the "C" mill in the same year, no alteration, except modernization of a dryer system, has been made on the production facilities of the Vancouver mill. In fact, knowledgeable people in the industry do not rate MacMillan Bloedel facilities as technically efficient and instead have advised us to "go see

Reed's Cantree operation with its Georgia Pacific automatic lay-up-line-- that's the pacesetter".

Evidently the firm does not support excess capacity in its plywood mills. In the 1970-74 period these mills were run at roughly 93 per cent of their rated capacity.

While MacMillan Bloedel does not appear as particularly progressive amongst softwood plywood manufacturers, it is a leader in the production of a substitute product, particle board. We will have more to say about this when discussing the firm's research and development effort.

We are, again, unable to make any statement concerning allocative efficiency for want of data on profits in the plywood operations of the firm.

Summary

This then is the plywood industry: highly concentrated with fragmentary evidence of price leadership and allegations of predatory practices; increasingly threatened by American imports, and probably unable to survive without a tariff wall; and of decreasing importance to MacMillan Bloedel, Ltd.

Table II.14

NATIONAL PLYWOOD MARKET

	1967		1971		1975*	
	MM sq ft (3/8")	% of total	MM sq ft (3/8")	% of total	MM sq ft (3/8")	% of total

ConsumptionTotal

Cdn consumption	1,420	1,752	2,245
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Source of Canadian ConsumptionConsumption

B.C.	1,286	90.6	1,501	85.7	1,455	64.8
East of Rockies	129	9.1	236	13.4	278	12.3
Imports	4	0.3	15	0.9	513	22.8

Production

B.C.	1,721	93.1	1,874	88.9	1,778	86.5
East of Rockies	127	6.9	235	11.1	277	13.5
Canada	1,848	100.0	2,109		2,055	

ExportsSource:

B.C.	427	99.8	361	99.4	281	99.6
East of Rockies	1	0.2	2	0.6	1	0.4
Canada	428	100.0	363	100.0	282	100.0

B.C. ExportsDestination:

U.K.	322	75.4	219	60.7	220	78.3
Other	105	24.6	142	39.3	61	21.7
TOTAL	427	100.0	361	100.0	281	100.0

* Tentative

Source: MacMillan Bloedel; Compiled from Statistics Canada, Catalogues 35-001, 65-004, and 65-007.

Table II.15

CONCENTRATION OF SOFTWOOD PLYWOOD PRODUCTION - ALL B.C.

1974 *

FIRM & PLANTS	PRODUCTION	
	MM sq. ft. 3/8" basis	% of total
Weldwood	383.6	20.9
Kent Ave	120.6	
Cariboo	113.8	
Ash	2.5	
T-Ply	90.6	
Canim Lake	56.1	
MacMillan Bloedel	322.5	17.6
Port Alberni	124.7	
Vancouver	197.8	
Canadian Forest Products	248.0	13.5
Pacific Veneer	183.0	
Balco	65.0	
Crown Zellerbach	237.6	13.0
Building Materials	98.0	
Kelowna	57.4	
Armstrong	82.2	
B.C. Forest Products	164.3	9.0
Delta	61.2	
Victoria	103.1	
Top 5	1,356.0	74.0
TOTAL B.C.	1,831.7	100.0

* 1975 data were available but labour disputes distort the figures.

Source: Council of Forest Industries and interviews.

Table II.16

CONCENTRATION OF SELLERS (BY FIRM) IN CANADIAN

SOFTWOOD PLYWOOD - 1974

	Domestic Sales MM sq. ft. (3/8")	% of Canadian consumption
Weldwood	382.7*	18.4
Canadian Forest Products	291.4*	14.0
MacMillan Bloedel	233.5	11.2
Crown Zellerbach	218.8*	10.5
LARGEST 4 FIRMS	1,126.4	54.1
TOTAL CANADIAN CONSUMPTION	2,083.0	100.0

*

Estimated assuming coast mills export 20 percent of output,
and including non-B.C. mills.

Source: Council of Forest Industries, MacMillan Bloedel.

Table II.17

CONCENTRATION OF SELLERS (BY GROUP) IN CANADIAN

SOFTWOOD PLYWOOD MARKET - 1974

	Domestic Sales MM sq. ft. (3/8")	% of Canadian consumption
Canadian Forest Products Group	437.6	21.0
C.F.P.	291.4	
Victoria Mills	108.2	
Crestbrook	38.0	
Weldwood	382.7	18.4
MacMillan Bloedel Group	316.0	15.2
MacMillan Bloedel British Columbia Forest Products (Victoria mill)	233.5	
82.5		
Crown Zellerbach Group	231.0	11.1
Crown Zellerbach British Columbia Forest Products (20% of Delta mill)	218.8	
12.2		
LARGEST 4 GROUPS	1,367.3	65.7
TOTAL CANADIAN CONSUMPTION	2,083	100.0

Source: From Table II.16 and interviews.

MARKET PULP

Wood pulp is an intermediate product in the papermaking process. Pulpwood is brought to the mill, pulped, washed, screened and then it is either dried to be sold as market pulp or it continues to be processed into paper.

In addition to the quality and species of the wood input, the process by which the material is turned into pulp strongly differentiates the output, whether pulp or paper. There are three general methods by which the lignin (the bonding agent in wood) is broken down to free the cellulose fibres which, when matted, form paper. These three are the chemical, mechanical and chemimechanical process.

In the chemical process (soda, sulphite and Kraft), the wood is combined with a reagent which dissolves the lignin and other non-cellulosic materials (carbohydrates, proteins, fats and resins) which are then removed from the pulp. The Kraft process is presently the most important chemical pulping method. Relative to soda and sulphite, the Kraft process has a higher yield (45-50 per cent of the wood input emerges as usable pulp), produces a stronger pulp,⁴⁹ and is more tolerant of low quality or resinous wood inputs. Kraft pulp is however harder to bleach and the process emits the noxious odours associated with pulping facilities.⁵⁰ Currently, Kraft represents 77 per cent of all chemical pulp produced in Canada and 43 per cent of total pulp production.⁵¹

Mechanical pulp is produced by physically breaking down the lignin by a grinding process. In fact, in most mills, pulpwood is actually pressed against a grindstone. The mechanical process has the advantage of a significantly higher yield than chemical pulping--90-95 per cent versus 40-50 per cent. However, the resultant pulp and paper is much weaker and is subject to rapid discolouration. Mechanical pulp is the basic input to newsprint. As of 1974, this type of pulp accounted for 39 per cent of total pulp production in Canada.

The chemimechanical process is actually a combination of the other two. Wood chips are treated with a chemical solution before grinding. Chemimechanical pulp is somewhat stronger than mechanical but yields are somewhat lower. This is a relatively new process and therefore accounts for only a small proportion of total Canadian production.

In 1974 Canada produced 21,331,000 tons of wood pulp. However, only 7,524,000 tons or 35.3 per cent of total output were sold on either the national or international market (see Table II.18, page 85). The explanation is that the majority of pulp producers are integrated forward into paper production and therefore consume their own pulp. Separating the domestic from the international market, it is found that only 5 per cent of Canadian pulp consumption is purchased on the market, while 95 per cent is used internally by the producing mill.

Table II.18 shows that 70 per cent of all sulphite and 92.6 per cent of all mechanical and chemimechanical pulp are consumed by the producing mills. Only Kraft is manufactured in significant quantities for use external to the producer. This leads us to two conclusions. First, market pulp is for the most part Kraft. We will thereafter define market pulp as Kraft pulp not

earmarked for internal use by the producing firm. Second, any determination of market power in the pulp market must be tempered by the realization that there are a large number of mills which could (and presumably would) offer Kraft for sale if market price exceeded its internal value to the firm, and if the firm had drying and processing facilities.

STRUCTURE

Concentration in the production of market pulp is high in British Columbia. However, as shown in Tables II.19 and II.20, four and eight firm concentration has declined over the last half decade from 62%/4 to 52%/4, and from 93%/8 to 84%/8. This decrease in concentration is due to growth in total capacity not matched by the largest three of 1970. MacMillan Bloedel and Canadian Cellulose (previously Columbia Cellulose) list absolute declines in market pulp capacity while Canadian Forest Products shows some growth. However, the big increments in capacity size came from British Columbia Forest Products (the Mackenzie mill), Weyerhauser (expansion of the Kamloops mill), and Weldwood (the Quesnel mill). Total capacity for the province increased by one-third over this period which is noteworthy in an industry where capital requirements are substantial.

Available evidence on optimal size in chemical pulping indicates that a considerable portion of this concentration is justified by exploitation of scale economies at the level of the mill. Table II.21 provides a summary of estimates of minimum optimal scale in chemical pulping. These estimates range from 100 to 300 thousand tons per annum, and seemingly have been increasing over the past 30 years. The most informative of these studies is Eklund's⁵² which gives an indication of both minimum optimal scale and the shape of the cost curve (Figure 1, page 84)

Costs per unit output drop quickly up to 400 metric tons/day (160 thousand tons/annum) and continue to drop gradually at least to a capacity of 1,000 metric tons/day (390 thousand tons/annum). Evidently a mill can be run at roughly 160 thousand tons/annum without being at too great a disadvantage *vis-à-vis* larger mills. However, costs apparently do fall as pulp mill size increases, although the limit of this falling cost range is not clear. Representatives of an international engineering firm involved with pulp mill design subscribe to the notion that "the bigger the better, up to the point that you are not trying to use unproved technology at too many points in the process". Their meaning is this. If the wood supply is abundant they will design the mill to have as large a capacity as possible without relying on untested machinery at more than a few crucial points in the process. To do otherwise, they argue, inevitably leads to start-up delays as unforeseen problems surface.

Assuming then that 160 thousand tons per annum is minimum optimal scale, the total British Columbia market pulp capacity could support 25 reasonably efficient mills. It does, in fact support 18 mills. However, the major producers are multi-plant. MacMillan Bloedel and Canadian Forest Products operate three mills each; British Columbia Forest Products, Canadian Cellulose and Rayonier each operate two. Multi-plant operations can of course be justified by scale economies attributable to the firm, a discussion of which we are postponing until the end of this chapter.

The level of producer concentration in the province is maintained by barriers to access to the raw material, a paucity of suitable sites, and the absolutely large capital requirements of mill construction. Oligopsony in the timber market has already been discussed at length.

Ideally, a pulp mill should be located so that it enjoys an abundance of fresh water both for use in the pulping process and as a source of power generation. Also proximity to a deep water port gives the mill a distinct advantage with respect to transportation. And, obviously, the mill must either be near a wood fibre supply or must be located in such a way that it can bring in pulpwood at reasonable cost (e.g., via water). Few sites with all these characteristics remain unexploited on the coast of British Columbia.

Current estimates of mill cost put capital outlay to build one ton of annual capacity at \$1,000.⁵³ At a minimum this implies \$160 million, and more realistically \$300 million. Weyerhauser⁵⁴ puts the cost of a 290 thousand ton per annum mill at \$219 million. This capital requirement is obviously absolutely large and constitutes a strong barrier to entry.

Concentration of sellers of market pulp is more difficult to determine than concentration of producers. The problem is defining the relevant market in geographic terms, and then ascertaining the market shares of individual firms.

For example, in 1971, the United States imported 2.6 million tons of market pulp, nearly all of it from Canada. It produced 2.7 million tons and exported nearly half of that. Thus, Canada provided roughly 63 per cent of all market pulp consumed in the United States in 1971. Exports to the United States represented roughly half of Canadian production of market pulp. The question then is, with nearly two-thirds of the U.S. market, do individual Canadian firms exert market power? The problem is further complicated when it is recognized that a number of Canadian producers are subsidiaries of U.S. firms and ship pulp to the parent firm. It cannot be assumed that such shipments are arms-length transactions. Still, no generalization about the destination of subsidiaries' shipments can be made. Crown Zellerbach claims that 74 per cent of its output goes to its parent,⁵⁵ while Weyerhauser claims little or none goes to its parent.⁵⁶

However, we can draw some inferences based upon admittedly bold assumptions. If we assume that MacMillan Bloedel shipped 58 per cent (the proportion of total Canadian exports of sulphate pulp going to the United States) of its 1971 output of market pulp to the United States, it implies that the firm supplied 7 per cent of that national market.⁵⁷ This of course would be an understatement. When tied subsidiary sales were noted and regional markets defined, the percentage would increase. If we applied the same assumptions to the destination of shipments by the top five Canadian producers (Canadian Cellulose, MacMillan Bloedel, Canadian International/Tahsis, British Columbia Forest Products, Prince Albert/St. Ann Nakkawic) we account for 30 per cent of United States' consumption of market pulp (not total pulp) in 1971. This is hardly a competitive market.

With regard to Canada, the market for Kraft pulp is unimportant with only 608 thousand tons purchased in 1974. This represented 17 per cent of all sulphate pulp consumed and 7.6 per cent of all produced.

CONDUCT

Historically it seems that pulp prices in North America were set by Scandinavian exporters who provided a significant amount of market pulp consumed in the United States. Guthrie argues that this does not hold today because Scandinavia has, for the most part, been displaced by Canada and consequently "Canadian market pulp producers probably have more effect now in setting prices than do Scandinavian producers".⁵⁸

Guthrie also found a significant amount of stability in the prices of both bleached sulphite and Kraft pulp, although he qualifies these findings by noting that they refer to list prices which may be ignored in times of weak demand. With this same qualification we note from Table II.22 that pulp prices are stable, especially when compared to lumber. Such stability or "stickiness" is of course a symptom of oligopoly pricing and it reinforces our earlier conclusion that this is not a competitive market. However, how these prices come to be set and how they are maintained is unclear. Guthrie contends that "the fragmentary information that is available on price determination for pulp does not indicate that price leadership is common in this industry".⁵⁹ However Rich argues, "in the Pacific market, chiefly Japan, price leadership is shared by British Columbia and Washington mills. In the North American market, several major companies in the west, chiefly in British Columbia and Washington, as well as major firms in eastern Canada and in southern United States, all play price leadership roles".⁶⁰ We have not found strong evidence to substantiate this claim, and therefore can only conclude, as does Guthrie, "that the market more nearly resembles an oligopolistic than a purely competitive model".⁶¹

Price stability is enhanced by the length of the supply contracts common to the industry. Representatives of MacMillan Bloedel say that these long-term contracts range from a minimum of three to a maximum of twelve years, with five years being the average, although spot sales and one year contracts are not uncommon. Buyers, while certainly not indifferent to price, are extremely sensitive to the security of their supply. They are primarily paper producers with large capital investments in their mills and are thus loath to be placed in a position of running those mills at less than capacity for want of pulp.

MacMillan Bloedel maintains traditional supply relationships with a number of European papermakers, among them Feldmuhle and Haindl. Additionally, the firm has purchased interests in several European firms (Koninklijke, Nederlandse Papierfabrieken, Netherlands; and Celupal S.A., Spain) to ensure sales of its market pulp.

With regard to market conduct then, the recognized imperative is to seek security; as a buyer to seek security of supply and as a seller to seek security of markets. The proliferation of both traditional buyer-seller relationships and joint ventures between pulp producers and paper manufacturers attests to the strength of this imperative.

PERFORMANCE

In the realm of technical efficiency, MacMillan Bloedel's--and for that matter nearly all sulphate mills in the province--are at or above the 160 thousand ton per annum lower limit of minimum optimal scale. Table II.23 shows capacities of all sulphate mills, regardless of whether the output was earmarked for internal use or market sales, as of 1970. MacMillan Bloedel's all exceed our estimate of minimum efficient scale and only one mill, Kamloops Pulp and Paper, was significantly below that level. The Kamloops mill has subsequently been expanded to a capacity of 437 thousand tons per annum which reinforces the argument that its original size was sub-optimal.

The simple comparison of minimum optimal scale with mill capacity to determine technical efficiency is admittedly naive. The majority of the sulphate mills are not single line units but rather are composites of replacement, modernization and expansion projects which have taken place over considerable spans of time.

The Harmac mill is a good example. Built in 1950 with a capacity of 90 thousand tons per annum, another line was added in 1952 (155 thousand tons per annum capacity) and another in 1963 (175 thousand tons per annum) making for a combined capacity for the mill of 420 thousand tons per annum. Harmac thus had three pulping facilities with common support facilities (e.g., transportation). Much the same sequence holds for both Powell River (a new Kraft mill was installed in 1968) and Port Alberni (sulphate capacity was expanded between 1955 and 1957). In such cases it is extremely difficult to determine whether the collection of machinery, some of it new and some a quarter of a century old, is in fact producing Kraft pulp at minimum average cost. Evidently MacMillan Bloedel does not maintain inordinate excess capacity in its market pulp facilities. The Harmac mill produced at roughly 88 per cent of capacity over the 1970-74 period.

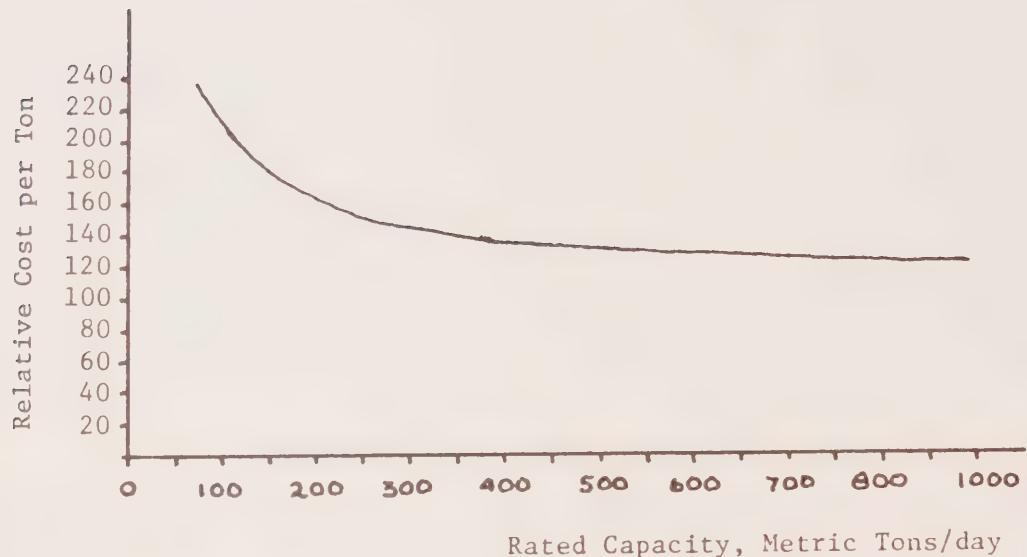
Without data on profits attributable to the production of sulphate pulp we are unable to make any statement concerning allocative efficiency.

Summary

The production of sulphate pulp is highly concentrated in British Columbia and this concentration is explained in large part by scale economies at the level of the mill. Accurate estimates of seller concentration remain elusive but we agree with other researchers that the market pulp industry does not conform to the competitive ideal. Industry performance seems to be at a reasonable level in the dimension of technical efficiency. We can say nothing with regard to allocative efficiency.

FIGURE 1

MANUFACTURING COSTS OF PULP*
AS FUNCTION OF MILL SIZE



*Refers to Bleached Pine Sulfate, air dry

Source: Risto Eklund, "Integration of Forest Industries," Unasylva,
Volume 21(2), No. 85, 1967, p. 21

Table II.18

PRODUCTION & CONSUMPTION OF WOODPULP* - 1974

	<u>CHEMICAL</u>			% of total Cdn. prod.	
	Sulphite	Kraft	Mechanical & Chemimechanical	Total	
<u>Production - 1974</u>					
Canada (M t.)	2,819	9,348	9,164	21,331	100.0
Percentage of total Canadian production	12.9	43.0	42.0		
<u>Consumption - 1974</u>					
by Producing Mill (M t.)	1,972	2,942	8,489	13,403	62.8
Percentage of total production of pulp type	70.0	31.5	92.6		
by other Cdn. mills (M t.)	99	608	13	720	3.4
Percentage of total production of pulp type	3.5	6.5	0.1		
Exported (M t.)	729	5,789	286	6,804	31.9
Percentage of total production of pulp type	25.9	61.9	3.1		

* Excludes dissolving and special alpha pulp.

Source: Canadian Pulp and Paper Association, Reference Tables 1975,
29th edition, October, 1975, Section III.

Table II.19

CONCENTRATION OF MARKET PULP*

PRODUCTION CAPACITY - B.C.

1970

	M t./annum	Percentage of B.C. capacity
MacMillan Bloedel	621	19.9
Canadian Forest Products ¹	525	16.8
Columbia Cellulose ²	500	16.0
B.C. Forest Products	280	9.0
<u>Largest 4</u>	<u>1,926</u>	<u>61.7</u>
Crown Zellerbach	280	9.0
Tahsis	260	8.3
Northwood	220	7.1
Rayonier	200	6.4
<u>Largest 8</u>	<u>2,886</u>	<u>92.5</u>
Total B.C.	3,116	100.0

* Bleached and unbleached Kraft pulp.

1. Includes Intercontinental (joint venture with Reed, Feldmuhle).
2. Includes Skeena (joint venture with Svenska Cellulose).

Source: Government of B.C., Department of Industrial Development, Trade and Commerce, The B.C. Pulp and Paper Industry, Victoria, 1970.

Table II.20

CONCENTRATION OF MARKET PULP*

PRODUCTION CAPACITY - B.C.

1975

	M t./annum	Percentage of B.C. capacity
Canadian Forest Products ¹	578	14.0
MacMillan Bloedel	539	13.1
B.C. Forest Products	527	12.8
Canadian Cellulose ²	490	11.9
<u>Largest 4</u>	<u>2,134</u>	<u>51.8</u>
Weyerhauser	437	10.6
Rayonier	367	8.9
Weldwood	263	6.4
Tahsis	262	6.4
<u>Largest 8</u>	<u>3,463</u>	<u>84.1</u>
Total B.C.	4,123	100.0

* Bleached and unbleached Kraft pulp.

1. Includes Intercontinental (joint venture with Reed, Feldmuhle).
2. Includes Skeena (joint venture with Svenska Cellulose), name changed from Columbia Cellulose when taken over by B.C. government.

Source: MacMillan Bloedel

Table II.21

MINIMUM OPTIMAL SCALE - CHEMICAL PULPING

M t./annum	From	To	Diseconomies	Method	Year of Data	Region	Source
100	370	?	Survivor	1955 - 1965	New York	J.A. Guthrie, <u>An Economic Analysis of the Pulp & Paper Industry</u> , Washington State University Press, 1972, pp 186-7.	
127	146	?	Survivor	1944 - 1955	Western U.S. & B.C.	J.A. Guthrie, G.R. Armstrong, <u>Western Forest Industry</u> , Johns Hopkins Press, 1961, pp. 120-21.	
88	none up to 390 M	Engineering estimate		1967	unspecified	* Risto Eklund, "Integration of Forest Industries," <u>Unasylva</u> , Volume 21(2), #85, 1967, pp. 17-27.	
160	?	?	?	1975	B.C.	Crown Zellerbach, <u>Submission to the Royal Commission on Forest Resources</u> , Vancouver B.C., November 1975, p. 25.	
300	?	?	?	1976	B.C.	Interview, Vancouver engineering firm.	
300	?	Engineering estimate					

* Study refers to bleached Pine sulfate.

Table II.22

PRICE MOVEMENTS - MARKET PULP* AND LUMBER**

	PULP	LUMBER
	Canadian Dollars per air dry short ton	2X4 Standard and better Canadian Dollars per thousand fbm
May 1975	372.00	180.00
June 1975	372.00	166.00
July 1975	372.00	190.00
August 1975	372.00	175.00
September 1975	372.00	170.00
October 1975	372.00	160.00
November 1975	372.00	182.00
December 1975	372.00	195.00
January 1976	372.00	193.00
February 1976	369.00	207.00
March 1976	369.00	199.00
April 1976	369.00	198.00

* Kraft bleached pulp

** Dry White Spruce

Source: Richardson Securities of Canada, Research Department,
"Forest Products Industry Statistics." (No date of
publication.)

Table II.23

CAPACITY OF SULPHATE
PULP ^{*} MILLS - B.C. 1970

	Thousand tons per annum
British Columbia	
Forest Products (Crofton)	340
Canfor (Port Mellon)	200
Columbia Cellulose (Castlegar)	210
Crestbrook (Skookumchuk)	140
Crown Zellerbach (Elk Falls)	415
Intercontinental (Prince George)	210
Kamloops Pulp & Paper (Kamloops)	90
MacMillan Bloedel (Harmac)	470
(Port Alberni)	318
(Powell River)	179
Northwood (Prince George)	220
Prince George Pulp & Paper (Prince George)	225
Rayonier (Woodfibre)	200
Skeena (Prince Rupert)	290
Tahsis (Gold River)	260

* Destined for either internal use or market sales.

Source: Government of British Columbia, Department of Industrial Development, Trade and Commerce, The B.C. Pulp & Paper Industry, Victoria, 1970, pages 26-27.

NEWSPRINT

In our previous discussion of the market for sulphate pulp, it was noted that nearly half of all pulp produced in Canada is mechanical and yet this commodity does not really enter into any market. The reason for this is straightforward. Mechanical (also known as groundwood) pulp has a low value/weight ratio and is thus rarely transported. It is the primary input in the production of newsprint and consequently groundwood mills and newsprint mills are generally located in close proximity, usually on the same site. In fact, for newsprint, the integration of pulp and paper production is so pervasive that it can be thought of as a single process.

As was explained earlier, the mechanical process breaks down the bonding agent in wood by literally grinding the fibre. The non-cellulosic components of the wood remain in the pulp which explains the extremely high yield of the mechanical versus the chemical process (90 per cent versus 45 per cent). Also, paper made from mechanical pulp has the bulk and opacity essential for printing. However, the resultant pulp and paper are weak in mechanical strength and are subject to rapid discoloration.

Newsprint is comprised of roughly 15 per cent chemical and 85 per cent mechanical pulp. It is a low-cost, low-weight, low quality form of paper. Newspaper publishers are the principal consumers of newsprint although some is used in comic books, telephone directories, and in "pulp" pocket books.

Upon casual examination, newsprint appears to be a homogenous product. However, engineers differentiate it according to a multiplicity of dimensions including bulk, burst factor, tear factor, breaking length, stretch, brightness, and opacity. These factors are of considerable importance to printers as they determine the runnability of the paper through the presses, and the readability of the final product.

STRUCTURE

Concentration in mechanical pulp capacity is high in British Columbia. As of 1970, MacMillan Bloedel controlled 64.8 per cent of mechanical pulp capacity and together with Crown Zellerbach and British Columbia Forest Products held over 98 per cent of provincial capacity (see Table II.24, Page 103). Over the ensuing five years, Crown Zellerbach sold the failing Ocean Falls mill to the provincial government. Also Finlay Forest Industries (partly owned by Japanese interests) opened a 105 thousand tons per annum groundwood pulp mill at MacKenzie. Otherwise, the structure is today as it was in 1970.

Because of the integration of pulp and newsprint facilities, it is tenuous to speak of minimum optimal scale in mechanical pulping alone. In general the size of the integrated plant is dictated by the technology of paper manufacture and thus enough pulp capacity must be available to continuously feed the paper machines. Be that as it may, we can still make some statement with regard to technical efficiency in mechanical pulping.

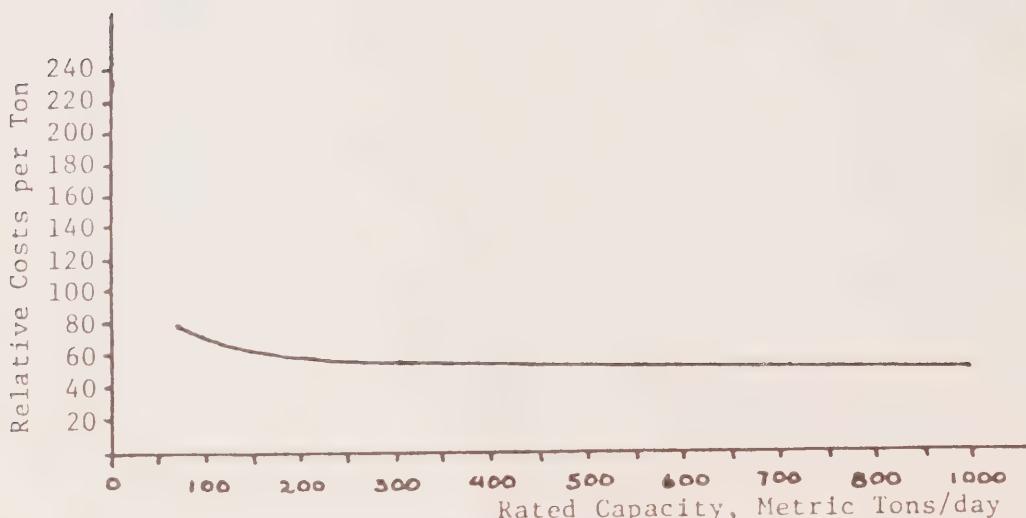
Minimum optimal scale in conventional mechanical pulping has been placed at roughly 100 thousand tons per annum by Eklund.⁶² The cost curve shown in

Figure 2 relates to a groundwood mill processing spruce. Per unit costs decline up to the 250 metric tons per day (100 thousand tons per annum) output level and then remain fairly constant over the range of the study.

Crown Zellerbach places minimum optimal scale at twice this, but they do not support their estimate with any detailed cost analysis.⁶³

Changing technology in mechanical pulping is in effect lowering minimum optimal scale. Thermomechanical pulping, a process by which chips are steamed and then put through a pressurized refiner, produces a pulp which is superior to stone groundwood in burst, tear, and breaking length. The pulp is of such

FIGURE 2
MANUFACTURING COSTS OF GROUNDWOOD PULP AS
FUNCTION OF MILL SIZE



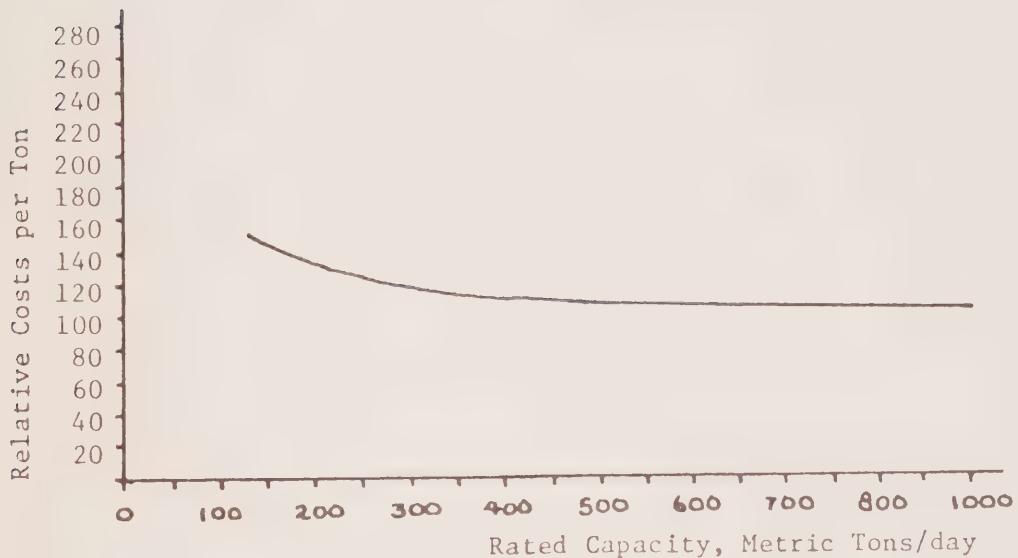
quality in fact that it could obviate the need for additions of chemical pulp to mechanical pulp in newsprint production.⁶⁴ Knowledgeable sources put minimum optimal scale for such mills at 50 thousand tons per annum, or half of Eklund's and one-quarter of Crown Zellerbach's estimate for minimum optimal scale of a conventional groundwood mill. MacMillan Bloedel has been an innovator in the thermomechanical pulping process.

Not surprisingly, concentration in newsprint production capacity is also high--both for British Columbia and for Canada. Nationally, MacMillan Bloedel is the largest firm with 12.5 per cent of total capacity (see Table II.25). Within British Columbia the firm accounts for nearly two-thirds of total capacity with the other three producers trailing far behind (see Table II.26).

There is only scanty and contradictory information on minimum optimal scale in newsprint. Crown Zellerbach places minimum optimal scale at

250 thousand tons per annum.⁶⁵ Eastman and Stykolt estimated that an efficient mill would house two paper machines and would have an aggregate capacity of 200 thousand tons/annum.⁶⁶ Eklund finds that all important scale economies are exploited at the 160 thousand tons/annum output level and further increases in output lead to little or no cost savings per unit produced.⁶⁷ (See Figure 3.) A local engineering firm which designs newsprint mills puts minimum optimal scale at 165 thousand tons per annum. If we assume that the engineers are correct this implies room in the British Columbia industry for a maximum of ten plants of minimum optimal scale, twice the number currently in operation.

FIGURE 3
MANUFACTURING COSTS OF NEWSPRINT AS
FUNCTION OF MILL SIZE



Again, the determination of seller concentration is more difficult than producer concentration. British Columbia producers sell only 8 per cent of their production in Canada, the remainder being exported (see Table II.27). Nearly two-thirds goes to the United States, 12 per cent to the Far East, and most of the remainder to South America and Oceania. Interesting as these statistics may be, they yield little information on either market shares or seller concentration because they do not refer to actual markets in any meaningful sense. Newsprint has a relatively low value/weight ratio and therefore transportation costs impose rigorous constraints upon the markets that British Columbia producers can successfully enter. In the United States, British Columbia producers are essentially limited to the area west of the Rocky Mountains. However, the forces which prevent them from shipping beyond this area also prevent eastern Canadian and U.S. mills from shipping to this market.⁶⁸ In 1975, 99 per cent of British Columbia exports to the United States, 71 per cent of total British Columbia exports and 65 per cent of British Columbia production went to the eleven western States (plus

Alaska and Hawaii). British Columbia, and particularly MacMillan Bloedel, are forces to be reckoned with in this market, supplying as they do 42.2 per cent and 27.5 per cent respectively of the area's consumption.

British Columbia producers dominate several other national markets, furnishing more than 20 per cent of the newsprint consumption of Pakistan, Singapore, Taiwan, El Salvador, and Ecuador, and more than 10 per cent of the consumption of Indonesia, Malaysia, Hong Kong, Venezuela, and Argentina (see Table II.28). The province provides roughly 10 per cent of Canadian consumption but again considering transport costs the actual market is probably the area west of the Rocky Mountains. Assuming this market segmentation exists, the British Columbia producers effectively control the western Canadian market with MacMillan Bloedel supplying roughly 60 per cent of the region's consumption.

The western United States are unambiguously the most important market of British Columbia newsprint and therefore deserve a more detailed investigation. Concentration in production capacity is high (see Table II.29), with the largest four firms accounting for 79 per cent of the area's total capacity. MacMillan Bloedel is the largest with 38 per cent of capacity, twice the size of its nearest competitor, Crown Zellerbach. These production statistics, however, overstate the market shares of the British Columbia mills, because, as noted above, roughly one-third of the province's output is shipped to areas other than the western United States (see Table II.27). The western U.S. mills, however, export negligible amounts of newsprint, and thus their share of their domestic market is understated in the capacity data. Our estimates indicate that MacMillan Bloedel accounts for 27.5 per cent of the sales in this market, while the firm has stated that it holds 30 per cent. It is the dominant firm. Several of the U.S. producers are not freely supplying newsprint on the open market, but instead are tied to newspaper publishers. Publishers Paper is controlled by the Times Mirror Company which in turn operates the Los Angeles Times. The Times is the largest paper in the region and its consumption of newsprint, 365 thousand tons per annum,⁶⁹ represents 22 per cent of total consumption and nearly 100 per cent of Publishers Paper's output.

The Hearst Corporation holds 15 per cent of Southwest Forest Industries and publishes the Los Angeles Herald-Examiner, the San Francisco Examiner, and the Seattle Post-Intelligencer, whose combined newsprint consumption (126 thousand tons per annum) represents nearly 8 per cent of total western United States consumption.

In addition, Inland Empire Paper Company has an equity relationship with Cowles Publishing, a Spokane, Washington newspaper publisher; and the West Tacoma Newsprint Company, operated by Boise Cascade, has links with 30 independent publishers. In total, more than a quarter of the production capacity of the area is tied through equity relationships to western U.S. newspaper publishers. Assuming that these mills were run at 90 per cent capacity in 1975, they would have accounted for 42 per cent of the newsprint consumption of the area, which gives some indication of concentration on the buyers' side of the market. Newspaper publishing is big, and evidently profitable, business.

Owen found that:

About half of all U.S. daily newspapers are owned by or are affiliated with newspaper chains. It is probable that this results both in certain cost economies and in some degree of monopoly advantage in national advertising.⁷⁰

Amongst these "certain cost economies" one might suspect pecuniary economies as a result of oligopsony power in the newsprint market. In the western U.S. market, the Hearst, Ridder, Times Mirror and Newhouse chains operate multiple newspapers. Their publications in the major cities of the Pacific Coast (Los Angeles, San Francisco, Portland and Seattle) accounted for nearly 40 per cent⁷¹ of all newsprint consumed in the western region. In addition to this obvious purchasing power, one must pay some attention to the more nebulous "power of the press". Initially it was pressure brought upon the U.S. government by the U.S. publishers which resulted in the removal of tariffs on Canadian newsprint. One suspects that those same publishers would not hesitate to bring pressure again for government action if they perceive irregularities in the behaviour of their newsprint suppliers. This, however, remains an unproved supposition.

In the western Canadian market, the major papers (Vancouver Sun and Province, Victoria Daily Times and Daily Colonist, Edmonton Journal, and the Calgary Herald) account for nearly all of British Columbia's Canadian sales of newsprint which represent only 8 per cent of British Columbia production. These papers do not exert power through the quantity of newsprint purchased, however the producers would obviously be foolish not to maintain goodwill with the molders of public opinion in their own backyard. There is in fact evidence of preferential treatment for British Columbia publishers which will be discussed presently.

We have not attempted to ascertain buyer concentration in the other markets in which British Columbia participates. In some cases the firms deal with individual publishers (Australia), in others they negotiate with centralized trading agencies (Mexico).

CONDUCT

Seller concentration in the western United States is characteristic of tight oligopoly. With the largest four firms controlling nearly 80 per cent of capacity, there will exist a strong recognition of the interdependency of pricing behaviour.

A recognized interdependence exists among a group of sellers in an industry when each of them in turn controls a sufficient share of the common market that his price changes (or output adjustments) will have a significant effect on the selling prices or sales volumes of the others, so that competitors will react to his price-output adjustments. Each of the sellers then recognizes this and sets or

alters his price or output in the light of the anticipated reactions by his rivals. This recognized interdependence, when it occurs, may involve all of the sellers in an industry or only some of them. For example, the large sellers in an industry may have a mutually recognized interdependence, but the members of a fringe of small sellers may not recognize interdependence either with each other or with the large sellers. Also, the interdependence which does exist may be strong or weak, tending generally to be stronger as the degree of the seller concentration is higher.⁷²

Once recognized, firms can respond to this interdependence with a host of pricing policies ranging from outright collusion to outright predation (price warring). Both extremes are of course illegal in both Canada and the United States. Our evidence indicates that pricing in the western U.S. market conforms to the price leadership model--particularly the "barometric" leadership variant. Our findings are not original.

Price leadership has been, and is, the prevalent pricing practice followed by the newsprint industry. This condition is to be expected from the economic characteristics of the industry. In the first place, the demand for the product is quite inelastic. Secondly, since fixed costs in newsprint production are relatively large, excessive price competition is particularly disastrous in the industry. Furthermore, large newspaper publishers, because of their financial strength and ready access to the weapons of propaganda, are in a strategic position to exert pressure on newsprint producers to reduce prices. As a consequence, the producers of newsprint have customarily resorted to price leadership as a device for preventing excessive price competition.

The evidence of price leadership in newsprint is extensive. For some 15 years prior to World War II, International Paper Company was generally recognized as the price leader in all but the western region of the United States. During this same period Crown Zellerbach Corporation, the largest western producer, was generally the price leader.

Since World War II, price leadership has again been practised in newsprint, although with some significant difference. First, no single firm has consistently taken the lead in setting prices. Second, several of the large Canadian newsprint firms have frequently taken the lead in initiating price changes both in Canada and the United States. Furthermore, price changes have not always been followed by all firms, although most have tended to follow.⁷³

Price leadership models are divided into three types: dominant firm, collusive, and barometric. The first is characterized by one firm controlling the majority of the output in an industry with a fringe of small firms, none of which are large enough to influence price. This model is not applicable

here as all producers are large and no one of them controls more than a third of the industry.

It is extremely difficult to distinguish between collusive and barometric leadership in both theory and practice. The former refers to a situation in which the principal firms recognize the benefits of co-operation and collectively have the power to set prices. In addition the leader must be willing and able to discipline any firm which deviates from its dicta. Examples of U.S. industries which at one time or other conformed to this model include cigarettes, steel, farm tractors, aluminum, rayon, nylon, tin cans, and automobiles.⁷⁴

Barometric leaders differ from collusive leaders in that they are occasionally ignored, they lose their leadership position and they actually only have the power to alter prices in recognition of real market changes (e.g., higher costs, increased demand). Whether the appropriate model to describe pricing in the western U.S. newsprint market is collusive or barometric leadership can best be determined by systematically tracing out price changes over the past 25 years. J.A. Guthrie provides us with an "interesting and illuminating" account.

At the beginning of 1950, the New York price was \$100 per ton. During that year, owing to uncertainty and apprehension caused by the Korean War, the supply of newsprint became very tight, and spot (noncontract) prices were reported to be as high as \$160 and \$200 per ton. In August 1950, Powell River, a large British Columbia company, announced a \$10 price increase, effective October 16 with freight allowed to main Pacific Coast ports. But in October 1950, International Paper Company of New York announced an increase of \$6 per ton (New York price \$106) effective November 1. And despite the earlier \$10 increase announced by Powell River and followed by several large Canadian firms, the \$6 increase and price of \$106 in New York prevailed. Canadian firms that had earlier announced the \$10 increase revised their prices downward to a \$6 increase.

Newsprint continued in short supply in 1950 and 1951. This condition was indicated by the fact that in August, 1950, the spot price was reported to have risen above \$200 per ton. Rising costs plus increased demand for newsprint produced another increase in 1951. In June of that year, Abitibi Power and Paper, an eastern Canadian company, announced a \$10 price increase, and a New York price of \$116 effective July 1. Most large Canadian firms immediately followed this lead and announced a \$10 increase effective July 1. Shortly thereafter, Crown Zellerbach of San Francisco also announced a \$10 increase with a price of \$116, but effective August 1. Another round of increases was initiated by Abitibi and Consolidated Paper, two eastern Canadian producers. They announced another price increase of \$10, giving a New York

price of \$126 effective June 15, 1952. All of the major Canadian companies followed this lead. American newsprint firms did not immediately respond to the increase, but on July 19, 1952, Crown Zellerbach announced a \$10 increase and a \$126 price at Pacific Coast ports effective immediately. Four other American newsprint firms announced price increases effective October 1, but for amounts differing from those quoted by Crown Zellerbach....The New York price remained unchanged during 1953, 1954, and much of 1955....

Another price rise for the industry was heralded in 1955 when St. Lawrence Corporation, a Canadian firm, announced a \$5 increase, and a \$131 New York price effective November 1, 1955. Abitibi Company also announced a \$5 increase and a New York price of \$131. But Canadian International Paper, a Canadian subsidiary of International Paper of New York, announced a \$4 increase and a New York price of \$130, and Powell River followed immediately with the same increase and price. Two other Canadian companies, Anglo Canadian and Anglo Newfoundland, announced a still different increase and New York price; their figures were a \$3 increase and a New York price of \$129...Crown Zellerbach (announced) a \$4 increase and a West Coast price of \$130.

The price held through 1956, but early in 1957, the pressure of increased demand and rising costs produced a further increase. On January 3, 1957, Abitibi Power and Paper, an eastern Canadian firm, announced a \$4 increase and a New York price of \$134 effective March 1. Within the next few weeks, most of the major Canadian and American newsprint producers, including Consolidated Paper, St. Lawrence, Bowater, Canadian International, Great Northern, and Crown Zellerbach, followed Abitibi's lead with a \$4 increase and a New York price of \$134 per ton....

Thereafter, the price of newspaper stabilized and remained constant for a considerable period--from the first quarter of 1957 until late 1964.

In November, 1964, MacMillan Bloedel, a British Columbia producer and successor to Powell River Company, in a surprise move announced a \$10 reduction to West Coast customers, thus reducing the West Coast price from \$134 to \$124 per ton. Other British Columbia and United States West Coast newsprint companies announced a similar price for West Coast customers. This reduction was roundly criticized by eastern Canadian and some American companies, who refused to follow suit. Thus an eastern and western price was established, the latter being approximately \$10 below the former. In October, 1965, the price began to weaken in eastern Canada, and Abitibi and Consolidated reduced their prices \$10 a ton to Canadian customers. However, this downward trend was reversed early in 1966.

The first evidence of this came in March, 1966, when Crown Zellerbach raised its price in western markets to \$134 a ton effective April 1, thereby restoring the price that had prevailed before the \$10 cut initiated by MacMillan Bloedel....

A rise in the West Coast price of newsprint was indicated late in 1966 when Crown Zellerbach announced an increase of \$4 a ton and a West Coast figure of \$138 effective January 1, 1967. Shortly thereafter, MacMillan Bloedel indicated that its West Coast price would be \$137 a ton, effective June 1, 1967. Crown Zellerbach immediately lowered its price by \$1 to meet the MacMillan Bloedel figure and made its price effective June 1 instead of January 1....

Rising costs were again given as the reason for another price rise of \$5 announced by International Paper in September, 1968, and effective January 1, 1969.

This \$5 increase was followed also by major West Coast producers, Crown Zellerbach and MacMillan Bloedel, but the West Coast differential was maintained, making the West Coast price \$142 a ton. One small West Coast producer, however, West Coast Tacoma Newsprint Company, a firm owned by newspaper publishers, announced an increase of only \$2 a ton, and a price of \$139 effective January 1, 1969.

Late in September of 1969, Bowater Paper announced a \$5 increase and a New York price of \$152 effective January 1, 1970. Consolidated-Bathurst (formerly Consolidated Paper), Crown Zellerbach, Abitibi, MacMillan Bloedel, and Great Northern followed suit shortly thereafter....

In the fall of 1970, another price increase of \$10 and a New York price of \$162, effective January 1, 1971, was announced by Anglo-Canadian Pulp and Paper mills, an eastern Canadian firm. The reasons given for the increase were declining profits and rising costs. Similar increases were then announced by leading Canadian and American eastern producers, including Great Northern. However, Boise Cascade Company, a West Coast American firm, announced a somewhat different figure--a \$10 increase except in Texas, Oklahoma, Arkansas, Kansas, and Missouri. In these latter states, price increase was given as \$8 a ton. MacMillan Bloedel and Crown Zellerbach of Canada followed with announced increases of \$8 a ton....

The foregoing record indicates that over the last 20 years the lead in setting newsprint prices has been taken by a number of different companies in Canada and the United States. Among American companies, the price announced by International Paper (including Canadian International) has prevailed most frequently. But three Canadian

firms, Abitibi and Consolidated Paper in the east and MacMillan Bloedel in the west, have together had their announced prices prevail more frequently than has International....

*While the record of price leadership manoeuvres would seem to indicate quite frequent changes, the number of changes in newsprint has actually been relatively small. In the 21 year period considered, the Bureau of Labour Price Index of newsprint shows only 24 price changes. Of these, 11 occurred during 1950-1952.*⁷⁵

The inflationary period of the early 1970's has seen another round of price increases similar to the flurry of changes in the 1950-52 period. West Coast prices stood at \$163 per ton in January, 1973, and rose to \$168 in March, to \$178 in September, to \$213 in March of 1974, to \$245 in August, and to \$280 in January of 1975.

In the western market, MacMillan Bloedel, following the merger with Powell River in 1960, exercised price leadership for the first time in November, 1964, when "in a surprise move it announced a \$10 reduction to West Coast customers". The price cut clearly established MacMillan Bloedel's leadership position as shortly thereafter Crown Zellerbach and the Los Angeles Times abandoned a planned joint venture to expand newsprint capacity on the West Coast. Presently, MacMillan Bloedel continues to exercise the leadership role in the western market. After an abortive attempt by Crown Zellerbach to raise prices in late 1975, MacMillan Bloedel announced an increase in early 1976 and,

*Crown Zellerbach Canada and British Columbia Forest Products announced on Tuesday (May 25, 1976) they will follow the lead of MacMillan Bloedel and increase the price of newsprint by \$20 per ton effective July 1, 1976.*⁷⁶

Two observations should be made in concluding this discussion of conduct in the western U.S. newsprint market. First, barometric price leadership is not innocuous. "Although more than one economist has earned a high fee by doing so, it would be misleading to conclude that any leadership pattern which displays those characteristics is socially harmless."⁷⁷ "It has been mistakenly argued by some that barometric price leadership is generally associated with competitive pricing of the sort attributable to atomistic markets."⁷⁸

Second, MacMillan Bloedel cannot exercise its leadership role with impunity. It is strictly constrained by potential entry from both eastern Canada and the United States, and from northern Europe. It is also constrained by the market and non-market power of the newspaper publishers to whom it sells.

MacMillan Bloedel dominates the British Columbia market for newsprint but, on the surface, is benign in that domination. The price charged for newsprint in the Vancouver area is 5 per cent less than that charged 40 miles south in the United States. The price differential is not explained by transport costs but is in actuality a gesture of goodwill and political

prudence. Whether the firm's behaviour is in fact benign is evidently under investigation by federal authorities. In September of 1976 the offices of MacMillan Bloedel, Crown Zellerbach, Domtar, Consolidated Bathurst, Abitibi and the Canadian Pulp and Paper Association were visited by combines investigators with warrants authorizing them to search for and seize documents relating to the marketing, sale and production of newsprint.⁷⁹ As of this writing, the Department of Consumer and Corporate Affairs has not released the results of these investigations.

For completeness, it should be noted that an export cartel exists in the industry. The Newsprint Exporters Manufacturers Association, legal under Canadian law, represents a number of Canadian newsprint exporters in the Latin American and Far East markets. MacMillan Bloedel, on its own initiative, withdrew from this organization several years ago. However, MacMillan Bloedel, British Columbia Forest Products and Crown Zellerbach jointly hold Export Sales Company Ltd., which markets the firms' newsprint exports to South East Asia.

PERFORMANCE

A superficial comparison of our estimate of minimum optimal scale with the capacities of the Port Alberni and Powell River mills leads to the conclusion that they are significantly above the minimum size required for efficiency. The Port Alberni mill is rated at 390 thousand tons per annum and Powell River at 610, as compared with our estimate of minimum optimal scale at 165 thousand tons per annum.

Both mills, however, comprise a number of newsprint machines, some half a century old.⁸⁰ Powell River has on-line machine number 5 (installed in 1926 but subsequently modernized), machine number 7 (installed in 1930 with 50 thousand tons per annum capacity), machine number 8 (installed in 1948 with 140 thousand tons per annum capacity), machine number 9 (installed in 1957 with 130 thousand tons per annum capacity), and machine number 10 (installed in 1967 with 160 thousand tons per annum capacity). Only machine number 10 comes up to minimum optimal scale although numbers 8 and 9 are not significantly below. Port Alberni produces newsprint on machines number 3 (installed in 1957 with 122 thousand tons per annum capacity), number 4 (installed in 1958 with 120 thousand tons per annum capacity), and number 5 (installed in 1963 with 149 thousand tons per annum capacity). None of these is quite up to optimal scale. Both the Powell River and Port Alberni mills are, according to commentators both inside and outside the firm, reasonably efficient although neither would qualify as models of the state of technology. Over the 1970-74 period, the Powell River facility ran, on the average, at 99 per cent capacity, and the Port Alberni mill at 92 per cent capacity. The firm obviously is not maintaining excess capacity in its newsprint facilities.

A determination of allocative efficiency would be extremely interesting in the case of newsprint. It is recognized as one of the most, if not the most, profitable groups within the firm. However, once again for want of data no estimate of this dimension of efficiency can be made.

With reference to progressiveness and product quality, the firm rates well according to representatives responsible for the newsprint purchases for several major newspapers. Changes in the technology of printing have necessitated stronger paper capable of being run through high speed presses. MacMillan Bloedel and other British Columbia producers have responded to this need and indeed British Columbia newsprint has a reputation for a quality product.

In the face of increasing input costs the firm reduced the basic weight of its newsprint from 32 to 30 pounds (i.e., 30 pounds for 500 sheets 24 inches by 36 inches) with no deleterious effects on either runnability or readability. Furthermore, the firm's innovations in the use of thermo-mechanical pulping is resulting in a quality newsprint with less chemical pulp inputs and hence at a lower cost.

Summary

Newsprint is highly concentrated at the producer level within British Columbia and at the seller level in the major markets open to the provincial mills. MacMillan Bloedel acts as price leader in the western United States and in western Canada. Our evidence indicates that the leadership system conforms to the "barometric" model and not to the collusive price leadership model. The firm's facilities are reasonably efficient but are not pacesetters for the industry. The firm's and the province's newsprint product is recognized to be of high quality by newsprint consumers.

Table II.24

CONCENTRATION OF MECHANICAL PULP CAPACITY

1970 - B.C.

	M tons per annum	% of total B.C. capacity
MacMillan Bloedel	910	64.8
Port Alberni	338	
Powell River	572	
Crown Zellerbach	290	20.7
Elk Falls	200	
Ocean Falls	90	
B.C. Forest Products	180	12.8
Crofton	180	
Scott Paper	24	1.7
New Westminster	24	
TOTAL B.C.	1,404	100.0

Source: Government of British Columbia, Department of Industrial Development, Trade and Commerce, The B.C. Pulp & Paper Industry, Victoria, 1970, pages 26-27.

Table II.25

CONCENTRATION IN NEWSPRINT PRODUCTION CAPACITY

CANADA 1975

	M tons per annum	% of total Canadian capacity
MacMillan Bloedel (3 mills)	1,274.6	12.5
Canadian International Paper (3 mills)	1,152.1	11.3
Abitibi (6 mills)	1,080.0	10.6
Consolidated Bathurst (5 mills)	1,018.5	10.0
LARGEST 4	4,525.5	44.4
Price Company (4 mills)	994.0	9.7
Ontario Paper (2 mills)	734.5	7.2
Bowaters Canadian Corporation (2 mills)	563.9	5.5
Great Lakes Paper (1 mill)	429.8	4.2
LARGEST 8	7,247.4	71.0
TOTAL CANADA	10,200.0	100.0

Source: Canadian Pulp and Paper Association, Annual Newsprint Supplement - 1974, page 2.

Table II.26

CONCENTRATION IN NEWSPRINT PRODUCTION CAPACITY

B.C. 1975

	M tons per annum	% of total B.C. capacity
MacMillan Bloedel*	1,000	62.2
Port Alberni	390	
Powell River	610	
B.C. Forest Products	262	16.3
Crown Zellerbach	245	15.2
Ocean Falls	100	6.3
TOTAL B.C.	1,607	100.0

* This capacity estimate differs from that of the C.P.P. (see Table II.25) due to different assumptions of annual operating days.

Source: Mac Millan Bloedel.

Table II.27

DESTINATION OF B.C. NEWSPRINT

1975

Destination	M tons	% of B.C. Production
Canada	91	8.0
Exports	1,044	92.0
U.S.	754	66.4
Far East	132	11.6
South America	78	6.9
Oceania	44	3.9
Others	36	3.2
TOTAL B.C.	1,135	100.0

Source: Council of Forest Industries, "Annual Report 1975"; Statistics Canada, Exports by Countries January-December, 1975, Catalogue 65-003, Information Canada, Ottawa, 1976, page 362; Government of British Columbia, Dept. of Economic Development, B.C. Summary of Economic Activity - 1975, Victoria, 1976, pages 8-9.

Table II.28

NEWSPRINT MARKET SHARES
B.C. & MACMILLAN BLOEDEL
1975

	Consumption	Imports from B.C.	B.C. share of market	MB share of market ²
	M tons	M tons	%	%
MARKET				
Singapore	30	24	80.0	49.8
El Salvador	10	7	70.0	43.5
Taiwan	47	22	46.8	29.1
Western U.S. ¹	1,677	741.4	42.2	27.5
Ecuador	16	7	43.8	27.2
Pakistan	31	11	35.5	22.1
Hong Kong	53	15	28.3	17.6
Argentina	123	25	20.3	12.6
Malaysia	40	8	20.0	12.4
Venezuela	88	16	18.2	11.3
Indonesia	90	16	17.8	11.1
India	225	31	13.8	8.6
Brazil	230	25	10.9	6.8
Australia	470	44	9.4	5.8
Mexico	240	22	9.2	5.7

1. 11 Western states plus Hawaii and Alaska.

2. Assuming MacMillan Bloedel has same proportion of British Columbia exports as it does of British Columbia capacity.

Source: Statistics Canada, Exports by Countries, Vol. 32 - No. 4, Catalogue 65-003, Ottawa, 1976; Canadian Pulp & Paper Association, Newsprint Data: 1975, 1976.

Table II.29

CONCENTRATION IN NEWSPRINT PRODUCTION
CAPACITY - WESTERN NORTH AMERICA

1975

	<u>Capacity</u> M of tons per annum	% of total area capacity	Equity relationship with western U.S. publisher
MacMillan Bloedel	1,000.0	38.1	no
Port Alberni, B.C.	390.0		
Powell River, B.C.	610.0		
Crown Zellerbach	456.0	17.4	no
Elk Falls, B.C.	245.0		
Port Angeles, Wash.	79.6		
Wauna, Ore.	128.5		
West Linn, Ore.	2.9		
Publishers Paper	361.4	13.8	yes
Newburg, Wash.	153.6		
Oregon City, Ore.	207.8		
B.C. Forest Products	262.0	10.0	no
Crofton, B.C.	262.0		
Boise Cascade	156.0	5.9	yes
Tacoma, Wash.	156.0		
Southwest Forest Products	154.0	5.9	yes
Snowflake, Arizona	154.0		
Garden State	108.0	4.0	no
Pomona, California	108.0		
Ocean Falls Corp.	100.0	3.8	no
Ocean Falls, B.C.	100.0		
Inland Empire	26.0	1.0	yes
Millwood, Wash.	26.0		
	2,623.4		

Source: American Paper Institute and Table II.26

FINE PAPER

The products comprising the fine paper class are extremely heterogeneous with many being very imperfect substitutes for others. Included in this class are the following grades: bonds, ledgers, writing papers, book and coated papers, cover, blotting and gummed papers, cardboards, bristol and blanks. Excluded from this class are groundwood printing and specialty papers (containing more than 50 per cent mechanical pulp) as they are more closely related to newsprint than to the fine papers.

The "fineness" of fine papers is a function of the quality of fibre used in their production. Lower quality is associated with high proportions of mechanical pulp while the best grades use linen or cotton in addition to chemical pulp.

The end use of fine papers is manifold. Envelopes, letterhead, writing pads, and business cards are but a small sample of the uses to which fine papers are put. A large proportion of fine paper production passes through printing houses before reaching final users and hence the printing trades represent a significant set of customers as they determine in large part the papers they will use.

STRUCTURE

Canadian production of fine paper in 1974 was 803 thousand tons of which 247 thousand tons were exported. Imports stood at 113 thousand tons making for domestic consumption of 669 thousand tons.⁸¹ Domestic producers are insulated by a 12.5 per cent tariff which has been of declining effectiveness over the last ten years. Imports have increased from 21 thousand tons to 113 thousand tons, or from 5.6 per cent to 16.9 per cent of domestic consumption, over the last decade.

Producer concentration is extremely high in Canada (see Table II.30, page 115). The largest manufacturer, Domtar, accounts for one-third of national capacity while the top four (Domtar, Abitibi, Eddy and Rolland) together account for over 90 per cent. These firms are all multi-plant with Domtar operating five mills (16 paper machines), Abitibi with two mills (11 machines), Eddy with three mills (10 machines) and Rolland with two mills (8 machines). The Domtar, Abitibi, Eddy and Dryden mills are all integrated facilities with on-site pulp manufacture. Rolland relies upon market purchases of pulp while MacMillan Bloedel ships from its own pulp mills to the New Westminster operation.

Estimates of minimum optimal scale indicate that there are considerable scale economies in fine paper production up to at least the 70 thousand ton per annum level.⁸² The critical issue, however, is not plant size but rather the length of production runs.

In the printing and writing grades, for example, the Canadian mills are called upon to produce an extremely wide range of products in relatively small quantities; as a consequence, the substantial economies arising from long production runs are not generally available. During 1974, three U.S. companies each individually produced more than 700,000 tons of printing, writing and related

*papers, and eight others each produced more than 400,000 tons. In Canada, during 1974, all of the producers of those same grades together manufactured a total of 715,000 tons.*⁸³

These "product-specific" as opposed to "plant-specific" economies have of late received considerable attention from industrial organization economists⁸⁴ and are of importance in industries producing heterogeneous outputs (i.e., fine papers). No estimates of the magnitude of these "product-specific" economies are available other than a consensus opinion amongst those questioned that they are "very significant".

Seller concentration is more difficult to determine. From Table II.30 it is clear that nearly all fine paper is manufactured in either Quebec or Ontario. The explanation for this is straightforward: fine paper consists of a substantial proportion of hardwood pulp (roughly 70 per cent in the East) and this input is relatively abundant in both Ontario and Quebec compared with British Columbia. This coupled with the fact that the majority of Canadian production is consumed in the East has led to the concentration of the industry in that area. Although transportation costs do not preclude intra-national shipments, market shares in British Columbia do not mirror shares of national production. MacMillan Bloedel, with less than 4 per cent of national capacity, accounts for 60 per cent of the British Columbia market, according to officials of the firm. Assuming that British Columbia consumes roughly 10 per cent⁸⁵ of national consumption this implies that all of MacMillan Bloedel's Island Mill's output is used within the province.

Buyer concentration in fine papers is relatively high as over three-quarters of all mill shipments go to a small number of wholesalers, while the remainder goes to converters manufacturing stationery products such as envelopes, writing pads, file folders and the like. A number of wholesalers are in turn held by the manufacturers. Domtar, Abitibi, and Rolland each control several merchant houses.

Within the British Columbia market five merchant houses, Coast Paper, Barber-Ellis, Crown Zellerbach, C.I.P. Van Pac, and Smith, Davidson and Lecky, essentially control the merchant trade. C.I.P. Van Pac is held by Canadian International Paper, and Crown Zellerbach is a part of the forestry group of the same name. Interestingly, Crown Zellerbach does not produce fine paper in Canada and its merchant house operates much like the unintegrated wholesalers. The two major houses, Coast and Barber-Ellis, account for roughly two-thirds of the paper distributed through the wholesalers.

The high level of concentration among the merchant houses is not explained by scale economies in wholesaling. Distribution by the houses is a fairly simple system. Large orders are drop-shipped while smaller orders are sorted on the shop floor from inventory. Maintenance of a full line does require considerable inventory costs but these are not so large as to preclude entry. Moreover, demand has increased steadily over the last 20 years, the merchant houses have prospered and yet, strangely, there has been little entry into the industry. Evidently some barrier to entry, other than scale economies or capital requirements, presents a strong impediment to potential competition.

CONDUCT

Market conduct of fine paper manufacturers and merchant houses is of considerable interest for this industry was the object of one of the successful prosecutions in the history of Canadian Anti-Combines enforcement. On June 4, 1954, seven fine paper mills, twenty-one fine paper merchants and the secretary of the Canadian Paper Trade Association were found guilty of offences contrary to Section 498 of the Criminal Code.

Of the seven mills, four were controlled by Howard Smith Paper Mills, which was subsequently taken over by Domtar. Co-conspirators R.B. Eddy and Rolland Paper continue to hold significant shares of Canadian output. Of the twenty-one merchant houses named in the case only Barber-Ellis holds a considerable share of the West Coast market. MacMillan Bloedel did not manufacture fine paper at the time and was not involved in the case.

The way in which the collusive arrangements operated is best described in the words of Roach, J.A.:

There were, in effect, two conspiracies within the larger one, and to appreciate fully how that larger one operated it is helpful to look first at the conspiracies within it and how they operated.

The Mills met regularly in meetings of the Book and Writing Section of the Canadian Pulp and Paper Association (C.P.P.A.). As a result of their discussions in those meetings, they agreed on a common price schedule for common use among the Mills....Those schedules covered not only prices but also conditions of sale, classification of customers, charges for "differentials", freight zones and loyalty and quantity discounts. Over the years we find the Mills, in addition to being governed by the uniform prices, agreeing to "protect" one another's accounts, that is to say, not to compete with one another even in the matter of salesmanship with respect to these accounts....It is difficult to conceive of any arrangement that could have been more complete and effective. Operating within that agreement we find those Mills acting in concert to avoid bringing up the quality of cheaper and lower grades to prevent them interfering with the sales of higher priced lines....

As might be expected, it was more difficult for the Merchants across Canada to organize themselves into an effective and tight group than it was for the Mills. Nevertheless, despite these difficulties, the evidence discloses that they did so....

Through their membership in the Canadian Paper Association (C.P.T.A.), and/or those organizations within it, the accused Merchants and the co-conspirator merchants were as tightly and effectively organized for their own purposes as were the Mills.

The Merchants had their price schedule,... It was most comprehensive in regulating all facets of the industry at the wholesale level. Within each of the four territorial divisions there was a common price for specified grades for that particular division but as between divisions the prices were not always the same. However, the Merchants in one division "respected" the prices of Merchants in every other division so as not to undersell them.

. One great difference between the Mills' organization and those of the Merchants was this--the Merchants had the audit system through which, by their own consent, they were policed to ensure that, as between them, there would be no cheating in observation of their common agreement.

I come back now to the larger conspiracy.

The Mills as a group, having agreed on common prices and almost every other conceivable condition at the production level, were still faced with competition from foreign mills. They had, throughout the period covered by the indictment, certain tariff protection against it.

However, it is as plain as a pikestaff from the evidence that they wanted to fortify their position still further. In order to do so they needed the co-operation of the Merchants.

The Merchants as a group, having agreed on common prices at the wholesale level, wanted protection against competition from other merchants outside their group. That required co-operation from the Mills in two respects: first, the Mills to refrain from selling to any outside C.P.T.A., and second, the Mills to grant the Merchants within C.P.T.A. such favourable purchase terms that other merchants dependent on foreign mills for their supply could not survive the competition.

Here was an area in which the two groups could combine, and, by each giving the other the assistance it needed, together they could monopolize and control their common part of the fine paper industry in Canada, the Mills at the production level and the Merchants at the wholesale level. In my opinion the evidence leads to the irresistible conclusion that they entered into a mutual assistance pact to accomplish that end. ⁸⁶

Succinctly, the mills and the merchants, through their respective trade associations, protected each other from competition. The mills denied their output to non-member merchants and the merchants denied outlets to non-member mills. This arrangement prevailed for 20 years. In traditional Canadian fashion the remedies imposed were conduct oriented. The guilty were fined and forbidden to continue their collusive behaviour. The structure of the industry on the sellers' side was unchanged, it remained concentrated. Nor was there any tampering with the structure of the merchant houses.

The long history of collusive behaviour in combination with no fundamental change in the market structure which facilitated that behaviour leads one to suspect the degree of competition existing in the industry today. While it is not within the scope of this study to ferret out combinations in restraint of trade we can provide evidence which is symptomatic of certain types of market conduct.

It should be noted at the outset that while both manufacturers and wholesalers are few in number, there is a proliferation of commercial printing houses, the chief customers of the merchant houses in British Columbia. As of

1975, Statistics Canada lists 205 printing establishments, nearly all of which were independent firms, operating in the province.⁸⁷ Also, there has been little entry into the industry either at the manufacturing or the wholesaling level. MacMillan Bloedel entered with its acquisition of the Powell River Company's one machine mill in New Westminster in 1960. On the wholesaling side, Barber-Ellis has operated in British Columbia since 1912, Coast Paper since 1941, and Smith Davidson and Lecky since 1907. Crown Zellerbach is a recent entrant, having taken over Columbia Paper Company in 1959. Clearly, Crown Zellerbach was an advantaged entrant relative to any unintegrated firm; while it produced no fine paper in Canada, it could, if it encountered difficulties in supply, rely upon the parent which has large production facilities in California.

A detailed and systematic comparison of prices charged for various grades and lots by the merchant houses shows striking similarities. Industry sources explain that a common, complex mark-up formula is applied by the merchant houses, resulting in similar if not identical prices.

Industry sources also indicate that a degree of loyalty still exists between the Canadian mills and the merchants. In fact, during the strikes of 1975, one merchant house was exhorting its branches to continue to order through the regular Canadian mills which in turn would procure the paper from stock or from American mills.

This is all admittedly fragmentary evidence from which one cannot with certainty determine whether remnants of the mill/merchants arrangements which were exposed in Regina v. Howard Smith Paper Mills et al continue to this day. Representatives of MacMillan Bloedel contend that they participate in no such formal or informal agreements. Also it should be remembered that the firm's entry into the industry diluted the control of the eastern mills (the original conspirators) in the western market. Additionally the marked increase in imports tends to dilute the effectiveness of restrictive arrangements. Nonetheless, the industry does not have the characteristics of vibrant competition.

PERFORMANCE

As mentioned above, it is extremely difficult to make estimates of minimum optimal scale in fine paper. Product-specific rather than plant-specific economies seem to be of primary importance in any evaluation of technical efficiency. The MacMillan Bloedel mill on Annacis Island is relatively new, constructed in 1959 and subsequently expanded to roughly 30 thousand tons per annum capacity. Representatives of the firm explain that the mill is relatively efficient but is plagued by constant set-up costs as it switches from production of one paper type to another to accommodate the regional market. Over the 1970-74 period the Annacis Island mill has been run, on the average, at 91 per cent of its capacity. The firm obviously does not maintain excess capacity in its fine paper facilities.

Once again, due to lack of profit data, we can make no statement of allocative efficiency.

Summary

Fine paper manufacture is of slight importance to MacMillan Bloedel. Its mill is small compared to the operations of its eastern competitors but large relative to western Canadian market. Historically the industry has been characterized by restrictive practices. The industrial structure which spawned these practices is unchanged, with the exception of some entry, an example of which is MacMillan Bloedel's British Columbia facilities. Performance in the dimension of technical efficiency seems adequate given the narrowness of the market.

Table II.30

CONCENTRATION OF FINE PAPER* CAPACITY

CANADA 1974

Firms & Component Plants	Capacity m t/a	% of total capacity
Domtar	274.5	33.6
Beauharnois, P.Q.	12.0	
Cornwall, Ontario	180.0	
Don Valley, Or	10.5	
St. Catharines, Ontario	42.0	
Windsor, P.Q.	30.0	
Abitibi-Price	185.1	22.7
Thunder Bay, Ontario	93.6	
Thorold, Ontario	91.5	
Eddy	175.0	21.4
Hull, P.Q.	95.0	
Ottawa, Ontario	35.0	
Espanola, Ontario	45.0	
Rolland	120.0	14.7
St. Jerome, P.Q.	100.0	
Mt. Rolland, P.Q.	20.0	
Dryden (Reed)	31.5	3.9
Dryden, Ontario	31.5	
MacMillan Bloedel	30.0	3.7
New Westminster, B.C.	30.0	
TOTAL CANADA	816.1	100.0

* Printing, writing and related grades - excludes groundwood, and coating operations.

Source: Canadian Pulp and Paper Association, Directory of Pulp and Paper Mills in Canada, 1974.

LINERBOARD/PACKAGING

The output of papermills is subdivided into two broad categories, paper and paperboard. The distinction is made on the basis of rigidity, weight and thickness with the board being heavier, thicker and more rigid than paper. Paperboard is further subdivided according to end use into containerboard, boxboard, and building board. Of these three containerboard is by far the most important, accounting for 55 per cent of all Canadian board production (by weight) in 1974, and 87 per cent of total board exports.⁸⁸

Containerboard is further divisible into corrugated and solid fibre material. The former refers to a combination of one or several plies of heavy paper lining and fluted sheet (corrugating material). Because of the insulation value, strength, low cost and light weight, corrugated containerboard is one of the most common packaging materials in use today. In fact the industry looks toward the day when it will find wide application in non-packaging fields such as cabinetry and furniture.

MacMillan Bloedel is a major producer of linerboard, the lining material in corrugated and solid fibre containerboard, and is integrated forward into the manufacture and distribution of corrugated containers in British Columbia, Alberta, Saskatchewan, and Manitoba, the United Kingdom and the United States. Essentially there are two separate markets, that for linerboard and the market for the finished container. We will consider each in turn.

STRUCTURE

Linerboard

Linerboard is manufactured primarily from unbleached Kraft pulp due to the strength of this fibre. Nearly all Canadian mills producing Kraft linerboard are also producers of Kraft pulp and thus the concentration of production found in the latter is reflected in the level of concentration in the former. As of 1975, four firms accounted for nearly three-quarters of Canadian capacity and the eight largest firms essentially controlled total Canadian capacity (see Table II.31, page 124). Foreign competition has evidently not been significant as Canada is a net exporter of linerboard and foreign sources account for less than 8 per cent of domestic consumption (see Table II.32).

Concentration in national capacity is in large part explained by technical imperatives. Eastman and Stykolt placed the smallest efficient size of an integrated linerboard mill at 213 thousand tons per annum. Unfortunately they had no estimate of costs at outputs above or below this minimum.⁸⁹ A more detailed engineering study indicates that average costs for a Kraft liner mill

(integrated with a sulphate pulp mill) decline rapidly up to roughly the 195 thousand tons per annum level and then remain fairly constant up to at least a 400 thousand ton per annum capacity.⁹⁰ Technical efficiency thus mandates a four firm concentration ratio of 56 per cent with each firm operating just one minimum optimal scale plant. That this estimate of minimum optimal scale is reasonable is attested to by the fact that the two most recent entrants to the industry, Eurocan and Labrador Linerboard, constructed mills (200 and 300 thousand tons per annum respectively) compatible with the estimate.

Concentration in production significantly understates seller concentration as the market is not actually national in scope. Linerboard has a relatively low value/weight ratio and thus is sensitive to transportation charges, especially truck or rail transportation.

MacMillan Bloedel supplies 32 per cent of the British Columbia linerboard market⁹¹ and, according to the following calculations, 43 per cent of the linerboard used in the four western provinces. In 1972 it shipped 38.6 thousand tons of linerboard to the western Canadian market (Manitoba, Saskatchewan, Alberta and British Columbia). In that year 602.0 thousand tons of linerboard was used in corrugating plants in Canada.⁹² Of this roughly 15 per cent, or 90.4 thousand tons, was consumed in the four western provinces.⁹³ Therefore, MacMillan Bloedel held 43 per cent of this market.

However it appears that the relevant market is not the four western provinces.⁹⁴ The firm, in supplying its corrugating plants in Manitoba and Saskatchewan does not ship from its own mills but rather "tonnage requirements of linerboard are traded with an eastern Canadian supplier to effect freight savings".⁹⁵ Evidently most of the firm's domestic shipments of linerboard go to Alberta and British Columbia. If then, the firm supplies 32 per cent of the British Columbia market, 43 per cent of the combined British Columbia, Alberta, Manitoba and Saskatchewan markets but actually ships very little to the latter two provinces, the clear implication is that it supplies the bulk of the Alberta market. A rough calculation puts that share at 100 per cent in 1972.⁹⁶ However, recently another firm has entered this market.⁹⁷

Corrugated Containers

In the market for corrugated containers, it is evident that there is a considerable amount of concentration on the sellers' side. Corrugated paper is bulky and cheap and hence is rarely transported long distances. Consequently actual markets are spatially quite narrow, certainly not national, rarely provincial, and are for the most part, regional.

As of 1973, MacMillan Bloedel was one of three firms operating in Manitoba, the only firm in Saskatchewan, one of two in Alberta, and one of four in British Columbia.⁹⁸ In that year its sales of \$23 million⁹⁹ represented 39.8 per cent of total value of shipments of corrugated paper products in the four western provinces. This percentage conforms to the firm's own estimate of a 38 per cent share of the British Columbia market.¹⁰⁰

Few estimates of minimum optimal scale in the manufacture of corrugated containers exist. Eastman and Stykolt's estimates¹⁰¹ are consistent with those of industry representatives who place minimum optimal scale at roughly 15 thousand tons per annum. Assuming that this is the case, concentration is in large part explained by the technology of the industry. MacMillan Bloedel's plant in Regina, the only corrugating plant in Saskatchewan, has a capacity of 10 thousand tons per annum. The Edmonton plant, again the only plant in the area, is rated at 28 thousand tons per annum. The Winnipeg and Calgary facilities, both of which compete locally with Domtar subsidiaries, are both rated at 16 thousand tons per annum.

CONDUCT

MacMillan Bloedel's strong position in the western Canadian linerboard market and in regional corrugated container markets gives the firm the potential power to practise price squeezing in either or both markets. Two questions emerge. Did the firm use its position in linerboard to weaken corrugated container manufacturers, thereby facilitating entry of MacMillan Bloedel into that market? Is there evidence that the firm uses its position in both markets to preclude entry into either?

The answer to the first question requires a brief review of the history of MacMillan Bloedel's acquisition of Martin Paper, its container manufacturing arm. Fortunately that history, and the environment of both industries at the time is richly documented in the 1962 Restrictive Trade Practices Commission's report on linerboard and shipping containers. The Commission, in addition to detailing a conspiracy in restraint of trade of which 20 firms were found guilty, systematically investigated acquisitions over a twenty year period. One of these was the acquisition of Martin Paper by the Powell River Company (1954), the sale of half interest in Martin Paper to MacMillan and Bloedel (1958), and the eventual merger of the Powell River Company and MacMillan and Bloedel (1959).

The acquisition of Martin Paper by the Powell River Company was described in a Statement of Evidence to the Commission.

*H.S. Foley, Chairman of Powell River...stated that his company had first been approached by John Martin, deceased President of Martin Paper, before the last war (World War II) and asked to engage in a joint venture for the manufacture of corrugated containers in British Columbia, or alternately, to supply containerboard to Martin Paper to enable it to do so. Nothing came of these negotiations but the matter was raised again by D.A. Hindle, then President of Martin Paper...in the fall of 1953. At this time Powell River was considering plans to invest surplus funds in a Kraft mill in order to diversify its operations. Accordingly, it was decided to investigate the possibility of purchasing Martin Paper, which would provide a market for a major part of the output of the proposed Kraft mill.*¹⁰²

The Powell River Company acquired Martin Paper in April of 1954. In 1955 MacMillan and Bloedel announced the construction of a new Kraft paper and containerboard mill at Port Alberni. The reasons for this expansion were explained as follows:

*Mr. R.M. Shaw (formerly president of MacMillan and Bloedel) testified that the Kraft machine at Port Alberni was installed in order to fulfill an expansion commitment of the company. A provincial forest management licence obtained by the company required it to expand its facilities to consume the waste products of its sawmills and plywood mills.*¹⁰³

MacMillan and Bloedel's planned expansion dampened the Powell River Company's eagerness to enter the linerboard market.

When Mr. Foley gave his evidence in May, 1956, he said that Powell River had given up its earlier plans to produce Kraft because MacMillan had got into this field ahead. Mr. Foley stated that his company had not engaged in any discussion with any other pulp and paper producers about the principle of integrating the shipping case and containerboard industry and that there was never any suggestion from outside the company that Powell River should acquire Martin Paper.¹⁰⁴

As of 1955, the year MacMillan and Bloedel announced construction of their linerboard mill, the regional linerboard markets were already characterized by a high degree of concentration and forward integration into the manufacture of corrugated containers. As shown in Table II.33, the Ontario/Quebec market was supplied by a tight oligopoly, the Prairies market and the Maritimes by near duopolies, and the British Columbia market by a near monopoly. While three of the major linerboard manufacturers were not integrated forward into corrugated container manufacture at the time, all had corrugating facilities by 1964.

The logical markets for MacMillan Bloedel linerboard production were British Columbia and the Prairies. These two markets were highly concentrated on the buyers' side. Two corrugated container manufacturers (Hinde and Dauch, and Martin Paper) held 92 per cent of the Prairies market and one of them (Hinde and Dauch) was integrated backward into linerboard production. In British Columbia, Canadian Boxes, controlled by Crown Zellerbach, the only major linerboard producer on the Coast, held 85 per cent of the provincial market for corrugated containers. The remainder was held by Martin Paper.

The scene was set. The Powell River Company had corrugating facilities but had abandoned its plan to enter linerboard as a result of MacMillan and Bloedel's expansion into the market. MacMillan and Bloedel had an 80 thousand ton/annum linerboard mill coming on-line in 1957 without any secure market. On March 27, 1958 (effective January 1, 1958), MacMillan and Bloedel acquired 50 per cent interest in Martin Paper for \$2.5 million.

It is truly surprising that MacMillan and Bloedel went forward with the expansion without a secure market. Evidently they knew full well that they would have to depend upon Martin Paper as a customer.

Mr. Shaw testified that before entering into the Kraft field MacMillan and Bloedel had had a market survey done by the Stanford Research Institute to assist the company in evaluating the market outlet for its Kraft Production at Port Alberni. The products considered were Kraft paper and paperboard (linerboard). The survey indicated the probable volume of sales of board and listed the prospective customers, one of the latter being Martin Paper. The survey foresaw the probability that Martin Paper would cease to be a main customer for MacMillan and Bloedel's board because Powell River was expected to start producing board itself.¹⁰⁵

These statements provide a strong temptation to speculate that MacMillan and Bloedel built the linerboard capacity to deter the Powell River Company's entry into the market and concomitantly gambled on an eventual acquisition of Martin Paper. This remains a speculation.

The forces behind MacMillan and Bloedel's entrance into the corrugated container market bear a strong resemblance to those stimulating its acquisition of forest tenures. The firm entered the linerboard market confronted by an oligopsony. Moreover there was an ongoing wave of acquisitions by linerboard manufacturers of corrugated container manufacturers which essentially diminished the number of independent buyers available to absorb MacMillan and Bloedel's linerboard production. One non-integrated corrugated container manufacturer, Martin Paper, remained in the relevant market. Acquisition of half interest in this firm was a logical, and perhaps essential, step for MacMillan and Bloedel. Had there been a large number of independent purchasers of linerboard the acquisition might never have taken place.

From this we conclude that the firm did not use its position in linerboard to weaken and then acquire corrugated container firms. Rather it built linerboard capacity and confronted a narrow and narrowing market for its output. Security of demand for its linerboard mandated forward integration into the corrugated container industry.

We have several reasons for believing that the firm does not use its position in linerboard and corrugating container manufacture to preclude entry into either.

Firstly, the bulk of the firm's output of linerboard is destined for its own Canadian corrugating plants or for its plants in Great Britain (Cooks Corrugated Cases Ltd., and Hygrade Corrugated Cases). A portion of the linerboard not committed to inter-firm transfer is traded to the western packaging plants of eastern linerboard manufacturers, who in turn supply linerboard to MacMillan Bloedel's Manitoba and Saskatchewan corrugating operations. These eastern manufacturers are obviously not subject to price squeezing as they could either retaliate or ship linerboard to their own packaging plants. MacMillan Bloedel is simply not that dependent upon sales to non-captive plants.

Secondly, the firm does not dominate the linerboard production to the degree necessary for predatory pricing. If the firm attempted to abuse its position one would expect Eurocan, Crown Zellerbach and eventually eastern and foreign sources to enter the markets.

Finally, and most convincingly, there has been entry into the corrugated container industry, and interviews with independent packaging firms yielded absolutely no evidence that MacMillan Bloedel exploited its position as both supplier and competitor. One interviewee was in fact effusive in his praise for the firm and emphatically stated that he had always been fairly dealt with by MacMillan Bloedel.

With respect to pricing in the linerboard market, the Restrictive Trade Practices Commission found evidence of outright collusive price fixing in the eastern market. In the West, Crown Zellerbach enjoyed a monopoly in production until the entry of MacMillan and Bloedel in 1957. However, the addition of one more producer had little effect on pricing policy.

It (MacMillan and Bloedel) adopted the 'general Canadian price' for sales in British Columbia, namely the price of United States' mills plus freight plus duty. An exception was made for sales to its own captive shipping container mill (the New Westminster, B.C., mill of

*Martin Paper), this price being subject to a refund of 50 per cent of the Canadian duty included in it. While prices in British Columbia were set at the highest import-excluding level, prices in Alberta were set by competition between British Columbia and eastern producers....The appearance of a new entrant in the western market...did not disturb the price structure in Alberta. The new entrant's prices were the same as those quoted by the eastern mills (Dryden and Red Rock, Ontario)....The transformation of a monopoly in the western market into a duopoly did not bring about a significant change in the level of prices set in that market.*¹⁰⁶

The history of market behaviour of manufacturers of corrugated containers in the eastern Canadian market is similar to that of linerboard. According to the Restrictive Trade Practices Commission, the eastern market was cartelized between 1931 and 1941, and when price-controls were relaxed in 1947, price-fixing was re-instated and prevailed up to the inquiry of 1962. While eastern manufacturers had to resort to an elaborate system of delivered zone pricing which made use of a sophisticated pricing manual, in British Columbia prices were set at the highest import excluding level.

Concentration remains high amongst manufacturers of corrugated containers in western Canada. MacMillan Bloedel is the only producer in several areas and one of a handful in several others. And, evidently, the pricing strategy remains the same. According to the firm, "prices are established to compete with those of other local, and out-of-province, manufacturers, including imports, as well as those of competitive products."¹⁰⁷

In interviews, several significant purchasers of packaging material in British Columbia stated that they perceived little if any price competition amongst provincial suppliers, and that prices were just marginally below the effective cost of imports. One indicated that due to enforced metric conversion it was now able to take advantage of U.S. sources (i.e., U.S. quarts being similar enough to litres for its purposes) and foresaw significant savings despite transportation and duty charges. It should also be noted that these interviews substantiated MacMillan Bloedel's claim that its packaging was subject to strong competition from non-wood based substitutes.

Product strategy has in fact been of importance to the firm. Corrugated packaging has taken the lead, lost it, regained it and sometimes lost it again to substitute materials made from wood or petroleum bases. Representatives of the firm contend that they are under constant pressure both to improve the product and to find new applications.

PERFORMANCE

As noted above, engineering estimates put minimum optimal scale in the production of linerboard at roughly 195 thousand tons per annum. Number 2 paper machine, installed during the expansion of the Alberni mill from 1955-67, is below minimum optimal scale. From 1970 to 1974, the machine has been run at about 92 per cent of capacity.

We have little information on minimum optimal scale in corrugated container manufacturing but the evidence indicates that plant size is, in western Canada,

constrained by the thinness of the market. The Regina Plant, the smallest of MacMillan Bloedel's facilities, is the sole operation in the area and we are led to conclude that the market simply will not support larger, more efficient, scale. The firm states that "all five corrugating plants of MacMillan Bloedel Packaging Limited in Canada are completely equipped, including corrugators, and all plants and equipment are in first-class operating condition with excellent flow and layout, resulting in low-cost operations while maintaining fine quality and service."¹⁰⁸

Evidently the firm does support some excess capacity in its corrugating plants. Total capacity in 1975 was listed at 100 thousand tons per annum while actual output between 1970 and 1975 averaged 53.8 thousand tons or 54 per cent of capacity. It should be noted that this does not represent obsolete excess capacity as the Manitoba plant was expanded in 1971, the Calgary plant in 1972, the Edmonton plant in 1974 and the New Westminster plant in 1971. The firm states that the low output/capacity ratio is due in part to short production runs which result in frequent, time-consuming, equipment change-overs. Additionally, capacity figures are based on two shift operations while a one shift operation is not uncommon. Finally, the cost of maintaining this excess capacity is not onerous.

Summary

The linerboard market is characterized by high producer and seller concentration. This concentration is in large part explained by the state of technology. Markets for corrugated containers are regional and seller concentration is also high here. Again scale economies relative to market size do justify to a great extent this degree of concentration.

Vertical integration in the industry provides some opportunities for predatory pricing but these opportunities evidently have not been used. MacMillan Bloedel's linerboard mills appear to be of an efficient size, however there is apparently some excess capacity in its corrugating facilities.

Table II.31

CONCENTRATION OF KRAFT LINERBOARD CAPACITY

CANADA - 1975

Firm	Capacity M t/a	Percentage of total Canadian capacity
Labrador Linerboard (Nfld.)	350	25.3
Domtar (Ontario)	227.7	16.5
Consolidated-Bathurst (P.Q.)	222.3	16.1
Eurocan (B.C.)	200.6	14.5
LARGEST 4	1,000.6	72.4
Canadian International Paper (P.Q.)	199.2	14.4
MacMillan Bloedel (B.C.)	117.6	8.5
Crown Zellerbach (B.C.)	40.7	2.9
Churchill Forest Industries (Manitoba)	10.5	.8
LARGEST 8	1,368.6	99.0
Minas Basin (Nova Scotia)	8.8	.6
Dryden (Reed) (Ontario)	3.1	.2
TOTAL CANADIAN	1,380.7	100.0

Source: MacMillan Bloedel.

Table II.32

CANADIAN PRODUCTION, EXPORT AND IMPORTS OF LINERBOARD

	1965	1970	1974
Production (thousands of tons)	595	776	1235
Exports (thousands of tons)	123	201	412
Exports as percentage of production	20.7	25.9	33.4
Imports (thousands of tons)	11	15	64
Domestic consumption (thousands of tons)	483	590	887
Imports as percentage of consumption	2.3	2.5	7.2

Source: Canadian Pulp and Paper Association, Reference Tables 1975, October, 1975, Part V.

Table II.33

CONCENTRATION AND INTEGRATION IN REGIONAL LINERBOARD MARKETS - 1955

Regional Market		Equity tie with corrugated container manufacturer
Ontario & Quebec		
Bathurst	33.6	yes (1)
St. Lawrence	27.2	no (1)
Hinde & Dauch	22.6	yes
	<u>83.4</u>	
Prairies		
St. Lawrence	52.5	no (1)
Dryden	33.7	no (2)
	<u>86.2</u>	
Maritimes		
Bathurst	68.4	yes (3)
Minas Basin	27.0	no (3)
	<u>95.4</u>	
British Columbia		
Crown Zellerbach	93.6	yes

- (1) St. Lawrence acquired Hinde & Dauch in 1959 thereby entering the corrugated container market.
- (2) Absorbed by Anglo-Canadian (1953) which was subsequently absorbed by Reed Paper Group Canada, which subsequently absorbed (1964) the Acme-Molson Group, which was engaged in the manufacture and distribution of corrugated containers.
- (3) Minas Basin acquired jointly with Bathurst, Maritime Paper Products which held Industrial Containers, Ltd., a manufacturer of corrugated containers in 1958.

Source: Restrictive Trade Practices Commission, Report Concerning the Manufacture, Distribution and Sale of Paperboard Shipping Container and Related Products, Ottawa, Queen's Printer, pp. 53, 55, 57, 59.

MARKET STRUCTURE AND
PROGRESSIVENESS

SURVEY OF THE THEORY AND LITERATURE

The relationship between market structure and technological progressiveness is but one more unsettled question in the area of industrial economics. Conflicting theories abound. At one extreme are those who argue that only in vigorously competitive markets will firms innovate and be forced to rapidly adopt the innovations of others. Monopolistic firms, they contend, grow lethargic behind protective barriers to entry. Satisfied with monopoly profits they settle for the quiet life. Moreover if they do innovate they are suspected of suppressing the diffusion of their innovations for fear of either eroding the demand for their products or causing the obsolescence of their capital stock. "The essence of the competitive hypothesis" is contained in this brief statement by George Stigler:

*I personally believe that future study will confirm the traditional belief that big businesses, for all their resources cannot rival the infinite resource and cold scrutiny of many independent and competing companies.*¹⁰⁹

Or, as M. Adelman puts it,

*...alleged opposition between competition and technological progress is difficult to accept. Where profits on old methods and old products are melted away by competition, the urge is greatest to seek the profits of new products and methods. Conversely, where profits can be maintained by monopolies or cartels, the urge is less. Surely a comparison of Europe with the United States confirms the theory; even more to the point is a comparison with underdeveloped countries, with their small-scale industries monopolizing even smaller markets. The better record of American industry is more plausibly explained by a more competitive environment than by oligopoly per se. For the other nations have more oligopoly and less progress.*¹¹⁰

Those in the opposition hold that it is only the firm which is insulated from the rigors of a highly competitive market that has both the wherewithal and the incentive to innovate. Such a firm enjoys at least a modicum of excess profits which can be allocated to research and development programs of uncertain outcome. By definition the market in which such a firm operates is characterized by some barrier to entry. It is argued that such barriers are crucial to innovation for they allow the innovating firm to reap the monetary rewards of its research and development efforts before these rewards are competed away by a host of imitators.

Joseph Schumpeter, in his classic Capitalism, Socialism and Democracy, made what must be one of the most literate statements of this doctrine:

Thus it is not sufficient to argue that because perfect competition is impossible under modern industrial conditions--or because it always has been impossible--the large-scale establishment or unit of control must be accepted as a necessary evil inseparable from the economic progress which it is prevented from sabotaging by the forces

inherent in its productive apparatus. What we have got to accept is that it has come to be the most powerful engine of that progress and in particular of the long-run expansion of total output not only in spite of, but to a considerable extent through, this strategy which looks so restrictive when viewed in the individual case and from the individual point of time. In this respect, perfect competition is not only impossible but inferior, and has no title to being set up as a model of ideal efficiency. It is hence a mistake to base the theory of government regulation of industry on the principle that big business should be made to work as the respective industry would work in perfect competition.¹¹¹

John Kenneth Galbraith, Schumpeter's most outspoken contemporary disciple, states:

The modern industry of a few large firms (is) an excellent instrument for inducing technical change. It is admirably equipped for financing technical development. Its organization provides strong incentives for undertaking development and for putting it into use.... The power that enables the firm to have some influence on prices ensures that the resulting gains will not be passed on to the public by imitators (who have stood none of the costs of development) before the outlay for development can be recouped.¹¹²

Empirical work has not resolved this controversy. Researchers in the area have been plagued by problems of methodology, definition and data availability. Nonetheless some tests have been made and some tentative conclusions have been reached.

These investigations have attempted to show the relationship between both absolute firm size and market structure, and progressiveness where the latter is defined in terms of research and development effort, innovation (the commercial application of an invention), and technological diffusion (the speed with which a firm or industry adopts an innovation). Each of these dimensions of progressiveness presents problems in quantification. For example, researchers have used dollar expenditures on research and development, number of people employed in research and development activities, and the frequency of patent grants as proxy measures of the research and development effort. All are flawed. Comparisons of monies spent on research and development must assume a homogeneity of accounting procedures and effectiveness per dollar spent. Comparisons of personnel assigned to research and development assumes that that personnel is homogeneous. Comparisons of patent output assume that those patents are of equal moment (which is obviously untrue--a better mousetrap is simply not equivalent to the Salk vaccine).

Innovations have been ascertained by asking trade associations and trade journals to identify 'important products and processes'. Rate of diffusion has been defined as the time elapsed between acceptance by 20 per cent of the firms in an industry and acceptance by 80 per cent of a given innovation, an obviously arbitrary designation.

Those measurement problems notwithstanding, academics have attempted to find

relationships between both absolute firm size and market structure, and progressiveness. With respect to absolute size Scherer summarizes their results as follows:

*What we find from analyzing the qualitative and quantitative evidence is a kind of threshold effect. A little bit of bigness--up to sales of roughly \$75 million to \$200 million in most industries--is good for invention and innovation. But beyond the threshold further bigness adds little or nothing, and it carries the danger of diminishing the effectiveness of inventive and innovative performance.*¹¹³

Similarly Mansfield concluded:

*Contrary to the allegations of Galbraith, Schumpeter, and others, there is little evidence that industrial giants are needed in all or even most industries to ensure rapid technological change and rapid utilization of new techniques.... Of course, this does not mean that industries composed only of small firms would necessarily be optimal for the promotion and diffusion of new techniques. On the contrary, there seems to be considerable advantages in a diversity of firm sizes, no single firm size being optimal in this respect. Moreover, the optimal average size is likely to be directly related to the costliness and scope of the inventions that arise. However, in general, these factors do not make giantism necessary. To repeat, there is little evidence that industrial giants are needed in all or even more industries to promote rapid technological change and rapid utilization of new techniques.*¹¹⁴

With respect to the relationship between market concentration and progressiveness Scherer's conclusion is:

*We emerge again with a threshold concept of the most favorable industrial climate for rapid technological change. A little bit of monopoly power, in the form of structural concentration, is conducive to invention and innovation, particularly when advances in the relevant knowledge base occur slowly. But very high concentration has a favorable effect only in rare cases, and more often it is apt to retard progress by restricting the number of independent sources of initiative and by dampening firms' incentive to gain market position through accelerated research and development. Likewise, it is vital that barriers to new entry be kept at modest levels, and that established industry members be exposed continually to the threat of entry by technically audacious newcomers.*¹¹⁵

Again Mansfield's findings are similar:

*Moreover, there is no statistically significant relationship between the extent of concentration in an industry and the industry's rate of technological change, as measured by the methods described (in this study).*¹¹⁶

With these theoretical and empirical links between market structure and progressiveness in mind we can now turn to MacMillan Bloedel's research and development effort, its record of innovation and its history of adoption of others' innovations.

PROGRESSIVENESS AND MACMILLAN BLOEDEL

In Canada, forest resources research is principally supported by industry, government and the universities. As shown in Table II.34, page 134, private industry accounts for a little more than half of all research expenditures, the Federal government for 38.3 per cent and the remainder by the Provincial governments and the universities. In 1968 the research expenditures by industry were roughly 0.5 per cent of total sector sales which is similar to the effort of U.S. firms (expenditures by lumber, wood products and furniture firms were equivalent to 0.5 per cent of sales for those industries, while the proportion for paper and allied products was 0.7 per cent¹¹⁷).

MacMillan Bloedel's expenditures on research and development over the 1967-1975 period are set out in Tables II.35 and II.36. Intramural expenditures refer to disbursements for work performed within the firm, and include work financed by others. Extramural expenditures include outlays for work performed outside the firm and went primarily to B.C. Research, the Pulp and Paper Research Institute of Canada and the British Columbia Council of Forest Industries. Roughly 93 per cent of the firm's research and development expenditures are intramural, and 7 per cent extramural. The majority of the intramural research effort is carried out by a wholly owned subsidiary, MacMillan Bloedel Research Ltd., while the other product groups do maintain their own research facilities.

The interesting question at this point is whether the large firms in the industry, particularly MacMillan Bloedel, are especially strong performers in the dimension of progressiveness. From Table II.37 it is seen that 57.2 per cent of industrial research and development expenditures were made by firms with sales greater than \$75 million. Unfortunately this breakpoint is too low to allow us to determine whether there is a significant difference between the performance of the large and the very large firms.

Representatives of MacMillan Bloedel argue that its large size is conducive to a strong research and development effort.

*...innovative activities can only be independently financed and maintained by large companies in the industry and by co-operative research through organizations such as the Pulp and Paper Research Institute of Canada (PPRIC). MacMillan Bloedel supports both a large company research organization (one of only three forest products corporations in Canada to do so) as well as providing a substantial part of the funding for the co-operative research activities of PPRIC.*¹¹⁸

Our evidence indicates that the firm does in fact expend amounts on research and development proportionately greater than its relative size in the sector.

From Table II.35 it is seen that the firm accounted, over a nine year period, for slightly more than 13 per cent of all intramural research and development expenditures of Canadian forest products industries. Over the same period the firm accounted for between 8.5 and 9 per cent of the activity (based on employment or value of shipments) of these industries. The firm's share of extramural expenditures is significantly less, averaging 5.9 per cent of total industry expenditures over the same period (see Table II.36). However, combining intramural and extramural disbursements the firm accounts for slightly more than 12 per cent of the total effort made by industry.

When measured in terms of employment of professional researchers the firm's performance is even stronger. Table II.38 shows that the firm's share of professionals ranged from 13.4 to 16.2 per cent of the total commitment of the forest products industries.

We do not have available any set criteria by which to judge the firm's accomplishments in the performance dimension of progressiveness. Evaluations of the quality and quantity of its inventions and innovations and an appraisal of the speed with which it has accepted the innovations of others requires a comparison of what was done and what could have been done. Lacking omniscience we cannot really determine what technological opportunities went unexploited and which innovations existed which should have been adopted but were not. We must be satisfied then with a simple review of the firm's record of invention, innovation and adoption of innovation. A detailed inventory is provided in Table II.39. It lists major and less significant inventions and innovations in pulping, bleaching, papermaking, lumber, plywood, particleboard, and packaging. Insofar as possible for each product or process an attempt has been made to identify the original developer; the date, country and firm of first implementation; and the date of adoption by MacMillan Bloedel.

We have eschewed performing exercises on these data such as calculating average innovations per firm, or average adoption lag for MacMillan Bloedel as we are unsure of the significance of such statistics. The interested reader may of course perform his/her own computations. However, several generalizations can be made.

Apparently the firm is quite productive in both invention and innovation in lumber, particleboard and plywood. Its record of acceptance of innovation in these areas also seems extremely good. In pulping and papermaking, where, presumably, research, development and implementation are relatively much more costly, the firm does not seem to be an international leader although it is active.

We do however have a criteria by which we can evaluate the firm's emphasis on certain research areas. After an extensive study of forest resources research in Canada the Federal government published recommendations concerning the direction industrial research should take in the future. This report, published in 1970, stated that:

1. *Forest industries should place more emphasis on woodlands research with a view to effective use of land as well as increasing productivity from forested land. As a matter of self-interest, industry should support research to define costs and benefits from investments in reforestation and other timber and land management*

practices. Corporations use their resources including timber at rates calculated to maximize the present worth of future net benefits, and commonly recognize that the ideas of continued production and an ethic of good husbandry are socially attractive. However, even where sustained yield and reforestation are legally required, the optimum investments remain undefined and little is known about the best approaches to ensure co-ordination of other resource uses with timber production.

2. Industries should conduct more research on reduction of cost for harvesting of fibre and transport to conversion sites in order to improve their competitive position. Research in wood products other than pulp and paper is neglected in relation to that in the domestic pulp and paper industry. Pulp and paper research in Canada is comparable to that in the United States but should be well ahead because of the relatively greater importance of the pulp and paper industry to the Canadian economy.
3. Additional industrial research is required into tenure systems, stumpage charges, co-operative agreements and application of technology which will stimulate integration of pulp and paper with other wood products production. Critical economic elements and sensitive social issues are involved. Effective solution of the problems could provide a competitive advantage for Canada's forest-based industries.
4. Thorough studies of potential demand for particular technical properties such as clear wood, are needed and should be reflected in stand-management and tree-improvement programs.
5. Increased emphasis should be placed also on new methods for use of wood, new forest products, and improved packaging systems involving wood products.
6. High priority should be given to the rectification of the unacceptably high air and water pollution which now exists in many forest and forest product operations, particularly pulp and paper plants. Education programs to teach public safety and good camping practices must be intensified and anti-litter legislation which now exists in many areas should be enforced.¹¹⁹

The Science Council calls for some de-emphasis of research in pulp and paper and more emphasis on woodlands research, forestry economics, new products, and pollution control. In a general sense the firm is responding to these recommendations. Table II.40 shows that over the last five years MacMillan Bloedel has redirected a considerable proportion of its research expenditures toward pollution control and new product development and has de-emphasized research into product/process improvement and cost reduction.

With respect to the first recommendation of the Council the firm commits substantial resources to woodlands research. The firm's silvicultural research program has developed over the last 25 years and currently has a \$426 thousand annual budget and five full time professional researchers. The program emphasizes applied research in the following areas: applied ecology,

improvement of genetic quality, reforestation, stand maintenance, nutrition, thinning, insect and disease control, application of exotic species, and the development of systems to evaluate forest management alternatives. The firm also maintains a land use planning advisory team with six full time professional researchers and a budget of \$360 thousand. This team has a number of non-research responsibilities but does expend considerable effort in the development of multiple resource use models.

The firm has been a leader in the development of improved systems for the transport of fibre to conversion points as mentioned in the Council's second recommendation. For example, MacMillan Bloedel pioneered development of the self-propelled, self-loading, self-dumping log barge which carries material from logging operation to conversion mill. Of at least equal importance, although neglected by the Council, is research into improved methods of transportation of finished goods from mill to market. The firm has done substantial work in such areas as: optimal terminal location; development of specialized ship's gear for handling pulp and paper products; train unitization; boxcar design; truck routing; and the design of ocean-going newsprint barges.

The third recommendation deals with forestry economics. This is an area which we have found to be severely neglected. Neither government, industry nor educational institutions have allocated sufficient resources to the study of the economics of this sector.

The firm's effort in new product development, which bears upon the fifth recommendation, has been primarily in plywood and particleboard. MacMillan Bloedel was responsible for self-release concrete forms (plywood), and slip resistant waferboard for roof sheathing. With increased expenditures in product development one would expect increased output. Also, the firm, in co-operation with the British Columbia Council of Forest Industries was instrumental in the development of the CLS lumber packaging system which has received wide acceptance.

As noted above, the firm allocates substantial resources to the study of pollution control, an area which the Council feels should have "high priority" as stated in its sixth recommendation. MacMillan Bloedel participated in the development of low pollution bleaching sequences, early adopted systems of sawmill residue use which obviated the need to burn these residues, and asserts that it will continue to do research and development in the area. With increasing public and corporate sensitivity to the pollution issue and with more rigid government standards to meet, we believe the assertion to be true.

Summary

MacMillan Bloedel's progressiveness score seems high. The evidence indicates that it is an active inventor, innovator and adopter of new products and processes. Its research efforts seem to be directed toward those areas which are in need of emphasis. However, this level of progressiveness cannot be used to justify the firm's size and market position without considerably more research into the actual benefits of that progressiveness and the causal links between progressiveness and size.

Table II.34

SCIENTIFIC EFFORT RELATED TO
FOREST RESOURCES RESEARCH
1968

	<u>Expenditures</u>	
	\$MM	%
Industry	29.4	51.2
Federal government	22.0	38.3
Provincial governments	3.3	5.7
Universities	2.7	4.7
	<hr/>	
	57.4	

Source: Science Council of Canada, Seeing the Forest and the Trees, Ottawa, Queen's Printer, 1970, page 13.

Table II.35

INTRAMURAL RESEARCH AND DEVELOPMENT FOR THE FOREST

PRODUCTS INDUSTRIES AND FOR MACMILLAN BLOEDEL

1967 - 1975

	Total intramural expenditures by forest products industries	Expenditures by MB	MB as % of total
	\$ MM	\$ MM	
1967	27.1	2.6	9.6
1968	23.9	2.6	10.9
1969	23.3	3.3	14.2
1970	22.9	3.4	14.8
1971	20.1	2.7	13.4
1972	19.8	2.9	14.6
1973	20.3	2.9	14.3
1974	25.8	3.4	13.2
1975	28.8	4.3	14.9
<u>9 year average</u>	23.6	3.1	13.2

Source: Statistics Canada, Industrial Research and Development Expenditures in Canada, 1973-1975, Catalogue 13-203, Ottawa, April, 1976; and MacMillan Bloedel.

Table II.36

EXTRAMURAL RESEARCH AND DEVELOPMENT FOR THE FOREST
PRODUCTS INDUSTRIES AND FOR MACMILLAN BLOEDEL
1967-1975

	Total extramural expenditures by forest products industries	Extramural expenditures by MB	MB as % of total
	\$ MM	\$ MM	
1967	4.3	.10	2.3
1968	4.0	.07	1.8
1969	4.4	.06	1.4
1970	5.3	.24	4.5
1971	4.8	.22	4.6
1972	2.5	.25	10.0
1973	3.2	.28	8.8
1974	3.4	.39	11.5
1975	3.6	.46	12.8
<u>9 year average</u>	<u>3.9</u>	<u>.23</u>	<u>5.9</u>

Source: Statistics Canada, Industrial Research and Development Expenditures in Canada, 1973-1975, Ottawa, Information Canada, April, 1976, Catalogue 13-203.

Table II.37

RESEARCH AND DEVELOPMENT BY SALES SIZE GROUP IN
(1) WOOD BASED INDUSTRIES - 1973

Sales size group \$ M	Research and development in this class \$ M	% of total research & development
1-999	297	1.5
1,000-9,999	983	4.9
10,000-49,999	1,805	9.0
50,000-74,999	1,363	6.8
75,000 +	11,426	57.2
Non-commercial (2)	4,903	20.5
TOTAL	19,967	

1. Wood based industries include: lumber, wood basic materials, manufacturing articles made entirely or mainly of wood, furniture, fixtures, pulp, paper and allied industries.
2. Principally research institutes and industrial associations.

Source: Statistics Canada, Industrial Research and Development Expenditures in Canada, 1973-1975, Catalogue 13-203, April, 1976.

Table II.38

PROFESSIONALS ENGAGED IN RESEARCH
AND DEVELOPMENT IN THE FOREST PRODUCTS
INDUSTRIES AND IN MACMILLAN BLOEDEL
1969, 1971, 1973

	Total professionals employed by forest products industries	Professionals employed by MB	MB as % of total
1969	465	68	14.6
1971	425	57	13.4
1973	413	67	16.2

Source: Statistics Canada, Industrial Research and Development Expenditures in Canada, 1973-1975, Ottawa, April 1976, Catalogue 13-203, and MacMillan Bloedel.

Table II.39

IMPLEMENTATION, INNOVATION AND ADOPTION BY THE FOREST PRODUCTS INDUSTRIES AND MACMILLAN BLOEDEL
MAJOR INNOVATIONS IN PULPING AND BLEACHING (ALL PROCESS)

Innovation	Developed by	First Implemented		Applied by MB
		Year	Company	
Continuous cooking	Kamyr	1950	Fengersfors Bruks	Sweden
High heat, diffusion washing, continuous digester	Kamyr	1962	Canadian Forest Products	Canada
Batch digester computer control	Nokia	ca. 1965		Finland
Diffusion washing	Kamyr	1963		Sweden
Oxygen bleaching	SAPPI	1970	SAPPi Limited	S. Africa
Soda oxygen pulping	MB	1975	Weyerhaeuser	U.S.A.
Displacement bleaching	Rapson	1975	Eastex Corp.	U.S.A.
Closed cycle bleached Kraft mill	Rapson	1976	Great Lakes Paper	Canada
Low pollution bleaching sequences	American Can MB	1970	American Can	U.S.A.
Copeland recovery system	Copeland	1976	Domtar	Canada
<u>Less significant</u>				
Continuous sawdust pulping	Kamyr	1958	Crown Zellerbach	U.S.A.
Kraft mill computer control		1964	C.I.P.	Canada
Non-condensable gas recovery and burning		1970		U.S.A. / Canada / Sweden
Black liquor oxidation	MB	1955	MB	Canada
Salt removal	MB	1975	MB	Canada
Hot stock refining	Rapson	1955		ca 1968
R2 C1O ₂ process	Rapson	1969	Union Camp	U.S.A.
R3 C1O ₂ process	Rapson			U.S.A.

Table II.39 (continued)

MAJOR INNOVATIONS IN PACKAGING

Innovation	Developed by	Year	Company	First Implemented	Country	Applied by MB
<u>Process</u>						
Flexofolder, in-line printing, slotting, glueing and bundling	Ward/ S. & S./ Langston/Koppers	1950's	Weyerhaeuser	1965	U.S.A.	
In-line rotary die cutters for corrugated board	Ward Machinery	early 1960's	St. Regis	1967	U.S.A.	
<u>Product</u>						
Poly-coated kraft, heat sealable cartons (milk)	Ex-Cell-O	1960	International Paper	1965	U.S.A.	
Impregnated and coated corrugated containers for fresh produce, poultry and fish	I.P.C.	late 1950's	International Paper	1963	U.S.A.	
<u>Less significant</u>						
<u>Process</u>						
Radiation curing coatings and inks		ca. 1970			U.S.A.	-
Automated corrugator	Werner H.K. Peters Maschinen Fabrik	early 1970's			Germany	-
<u>Product</u>						
Printed, barrier-coated board for frozen food packaging	Marathon	1960's	Marathon Corporation (now American Can)	1960's	U.S.A.	

Table II.39 (continued)

MAJOR INNOVATIONS IN PARTICLEBOARD

Innovation	Developed by	Year	First Implemented Company	Country	Applied by MB
<u>Process</u>					
Bison process	Bison	late 1950's		Germany	1965
Continuous press	Bison-Mende	1971		Germany	-
Caul-less forming		1962		Germany	-
<u>Product</u>					
Structural waferboard	Pack River Lumber Company	1957	Pack River Lumber Company	U.S.A.	1965
<u>Less significant</u>					
<u>Process</u>					
Radio frequency curing		1960's		U.S.A.	-
Low solids resin for improved bonding	MB	1974	MB	Canada	1974
<u>Product</u>					
Overlaid particleboard for high quality finishing	MB	1965	MB	Canada	1965
Slip resistant waferboard for roof sheathing	MB	1975	MB	Canada	1975

Table II.39 (continued)

MAJOR INNOVATIONS IN PLYWOOD

Innovation	Developed by	Year	Company	First Implemented	Country	Applied by MB
<u>Process</u>						
Automatic layup of veneer	Georgia Pacific or Weyerhaeuser	early 1960's	C.P./Weyerhaeuser	U.S.A.	1968	
Automatic veneer clipping	MB	1963	MB	Canada	1963	
Retractable chuck and back-up roll	Durand, Canada	early 1960's	MB?	Canada	early 1960's	
Wide belt high speed sanding	Time Savers	1950's		U.S./Canada	1955	
<u>Product</u>						
plywood with oriented flake board core	Potlatch	1976	Potlatch	U.S.A.	—	
preserved wood foundations	American Plywood Association	1974		U.S.A.	1976	
<u>Less significant</u>						
Automated finishing line	MB	1958-60	MB	Canada	1958-60	
Synthetic plastic patching	MB	1961	MB	Canada	1961	
Jet dryer	Moore Dry Kiln Company	1962			1966	
Automatic veneer clipper scanner	Black Clawson			U.S.A.	1969	
<u>Product</u>						
Self-release concrete forms	MB	1966	MB	Canada	1966	
K3 Sander dust glue extender	MB	1975	MB	Canada	1975	

Table II.39 (continued)

MAJOR INNOVATIONS IN LUMBER

Innovation	Developed by	Year	First Implemented Company	Country	Applied by MB
<u>Process</u>					
Chip n saw systems	Can-Car	1963-68	MB	Canada/U.S.	1963-68
Self-setting headrig	MB	1958	MB	Canada	1958
Automatic sorting	Moore, U.S.A.	ca 1963	MB?	U.S./Canada	1963
Cellon wood treatment	Koppers	1961	Koppers	U.S.A.	-
Mobile logging spar	Madill/Skagit	late 1950's	MB?	U.S./Canada	late 1950
High strain band mills	Sweecan	1967	Weyerhaeuser	Canada	1967
Twin/Quad band mills		1968	Potlatch	U.S.A.	1968
Double arbor saw edgers		1968		U.S.A.	1970
Internal fan indirect heated steam kilns	Standard Dry Kiln Company, Canada				1958
<u>Less significant</u>					
In-line moisture measurement	Laucks, U.S.A.	1962		U.S.A.	1964
Abrasive planing	Time Savers	1973		U.S.A.	-
Non-leaching fire retardants	Koppers	1969	Koppers	U.S.A.	-
CLS packaged lumber	COFI	1963	MB <i>et al.</i>	Canada	1963
Timber sorting cranes	Beal-MB	1964	MB	Canada	1964
Mechanical barker for cedar	Nicholson	1972	Masonite Corporation	U.S.A.	1975
Water guides	Thrasher (Mr.)	1966	Masonite Corporation	U.S.A.	1967
Tunnel dryer for poles	Oeser Cedar Ltd.	1964		U.S.A.	1974
EnergeX burner	EnergeX Ltd.	1973	Lane Plywood	U.S.A.	1975
<u>Product</u>					
Polymer impregnation for wood stabilization		1968-69		U.S.A.	-

Table II.39 (continued)

MAJOR INNOVATIONS IN PAPERMAKING AND MECHANICAL PULPING (ALL PROCESS)

Innovation	Developed by	Year	First Company	Implemented	Country	Applied by MB
Chip refiner groundwood for newsprint	Bauer	1961	Crown Zellerbach	U.S.A.	1961	
Thermomechanical pulping	Bauer	1972	Blandin Paper Company	U.S.A.	1975	
Centricleaners	Howard Smith Paper Mills/Hammermill Paper	1956	Howard Smith Paper Mills	Canada	1956	
Synthetic fabric wires	Formex, U.S.A.	late 1950's	U.S.A.	ca 1968	U.S.A.	
Foils-Fabrics	Huyck	1960's	Quebec North Shore Paper Company	Canada	1965	
Twin wire forming -- newsprint	Black Clawson	1968	C.I.P.	Canada	1969	
Unipress (no open draw)	KMW, Sweden	1969		Canada	—	
Ventanip grooved press	Beloit	early 1960's	U.S.A.	ca 1965	U.S.A.	
Pocket ventilation - dryer fabrics	Scapa	1967			1968	
Flash drying (groundwood)	S.F., Sweden	1958		Norway	—	
Computer control of paper machining		early 1960's	Wolvercote Paper Mill	U.K.	1971	
<u>Less significant</u>						
Wet suction boxes	KMW, Sweden	1962			1972	
Coverflow headbox	Beloit	1966			—	
High consistency forming	Ahlstrom, Finland	1972		Sweden	—	
Fabric Press	Mead	1964	Mead Corporation	U.S.A.	—	
Papridrier	PPRIC	1970	C.I.P.	Canada	—	
Swimming roll	Voith, Germany	ca 1963			1966	
Flakt airborne drier	S.F., Sweden	1960			1963	
Air-loaded calender	Beloit			U.S.A.	ca 1965	
Breaker stack				U.S.A.	ca 1963	

Table II.40

BREAKDOWN OF RESEARCH EXPENDITURE
INTO MAJOR AREAS OF ACTIVITY

	Product/process improvement and cost reduction	Pollution abatement	New product development
1972	93%	7%	0%
1973	84	15	1
1974	73	15	12
1975	62	25	13
1976	55	30	15

Source: Figures taken from MacMillan Bloedel Research Limited
Annual Operating Plans.

SCALE ECONOMIES AT THE LEVEL OF THE FIRM

Up to this point, we have generally ignored scale economies associated with any factor other than plant size. Each process (sawmilling, pulp, newsprint, etc.) was considered in isolation, estimates of minimum optimal scale, where they existed, were provided, and a statement of how much concentration in production was justified by exploitation of those plant scale economies was made.

There are however other sources of economies of scale and it is to these that we now turn. Three sources of economies are distinguishable, economies of vertical integration, economies of multi-product operations, and economies of multi-plant operations.

VERTICAL INTEGRATION

Strictly speaking, vertical integration refers to the combining of successive steps of a production process with the output of each step furnishing the input of the next. In Figure 4 page 156 such integration clearly exists as forest management, timber harvesting, transportation, sawmilling, lumber transportation and distribution have been combined in one enterprise.

Economies of vertical integration, as already discussed in detail, emanate from technological complementarity, coordination of output from stage to stage, avoidance of transactions costs, and pecuniary economies. Using this taxonomy we will work through the different stages of production and attempt to identify economies of vertical integration when they occur.

The link between forest management and harvesting is straightforward. What economies exist are attributable to coordination of output between planting and harvesting. However, with a growing cycle of 80 years it is difficult to believe that the firm truly coordinates present planting with its anticipated fibre requirements more than a half century in the future.

Between harvesting and transport to the sawmill or pulping facility there is a definite need for coordination of supply. Harvesting and waterborne transportation of logs cannot be done in disregard of the climate. Certain areas can be logged only in the summer months and similarly some water routes become unreliable during inclement weather. In certain salt water log dumps, for example Masset Inlet, the timber is subject to deterioration due to insect infestation and must be moved to mills within several months of dumping to avoid loss.

Once cut and in transit, the timber can of course be directed to either a sawmill or pulp mill. Coordination of supply is of much greater importance to the pulp mill as it has considerably higher fixed costs and because shutdown/startup charges are much higher than for a sawmill. Again, what economies exist will be attributable to coordination of output.

Forward integration from sawmilling, and shingle and plywood manufacturing into transportation and eventually into distribution seemingly does not give

rise to significant real, as opposed to pecuniary,¹²⁰ economies. MacMillan Bloedel argues that through the use of "large, specialized carriers operated by the company's shipping department...more efficient service"¹²¹ is offered to eastern United States and European markets. However, smaller firms have formed shipping organizations (e.g., Seaboard Lumber) and ostensibly can exploit the same economies.

The integration of pulp and paper production unquestionably results in real economies. The two processes are unambiguously complementary. In the continuous process, pulp emerges from the refiners, is screened, and in a liquid form enters the head box of the Fourdrinier machine. The fibre is matted, pressed, drained, pressed, dried and is at this point paper. When pulping and papermaking facilities are spatially separate the pulp must be dried, baled, and transported. At the paper mill it must be put back into solution before entering the process. The savings of integration are obvious.

This intuitive assumption of cost savings is substantiated by engineering studies. Eklund¹²² found marked economies in the integration of the appropriate

pulping facilities with the production of newsprint, foodboard, unbleached machine-glazed paper and sackpaper. His results with regard to sackpaper were presented in detail and indicate that an integrated mill (capacity of 77-165 thousand tons per annum) enjoyed a cost saving of from 10 to 15 per cent when compared with an unintegrated mill of equivalent capacity. The sources of these savings were: raw materials, labour, administration, fuel, maintenance and capital charges.

Eklund notes that a spatially unintegrated paper mill may be preferable when a variety of paper grades using mixed pulp types is to be produced. Evidently this explains in part why MacMillan Bloedel's Island Paper Mill was not located contiguous to a pulping facility. Fine paper requires mixed pulp grades, including hardwood pulp which is not produced by the firm.

Output of the paper mills includes both finished and intermediate products, an example of the former being newsprint and of the latter, linerboard. The firm is integrated forward into the transportation of newsprint, especially transportation to the California market. So important is this market that it justified the design and construction of ocean-going barges which carry newsprint from Port Alberni to the firm's storage facilities in California.¹²³ Real economies emanating from this integration are based upon coordination of out-shipment with production. How important they are is unclear. Similarly, we assume that the integration into newsprint distribution also facilitates coordination of supply and consumption.

MacMillan Bloedel's paper converting facilities (i.e., corrugated container and box manufacturers) are not spatially integrated with the paper mills. The reason for this is explained by Eklund.

Owing to marketing and shipping costs, and the need for quick delivery of small tonnages, many conversion operations need to be located close to the customers. Owing to the market oriented location and less pronounced economies of scale in conversion, technical integration between paper conversion and paper production is frequently not feasible even if financial integration does exist.¹²⁴

Eklund's findings are supported by the evidence brought before the Restrictive Trade Practices Commission in 1962.

*Thus there is no technological reason why there should be vertical integration between Kraft mills and shipping container manufacturers. When this has taken place it must have resulted from financial and commercial considerations.*¹²⁵

Mr. Shaw (former president of MacMillan Bloedel) testified that no economies resulted from the integration of Martin Paper and MacMillan and Bloedel's board operations.¹²⁶

Eastman and Stykolt found that "there are no cost advantages from integration (of container manufacture) with containerboard (linerboard)", and they support this conclusion with interview evidence.¹²⁷

MULTI-PRODUCT OPERATIONS

The second type of scale economies is associated with multi-product operations and falls somewhere between strict vertical integration and strict horizontal integration.¹²⁸ By multi-product operation we refer to the production from a common feedstock, of several outputs none of which serve as an input for another. For example, wood fibre can be used to produce lumber, shingles, plywood or pulp. None of these serve, strictly, as an input for another. When all of these processes are carried on by the same firm, and in some instances on the same site, there can be real resource savings. These savings involve the use of residues (actually a joint product problem) and the assigning of the raw material to the highest value end use (an economy of non-specialization).

Savings associated with residue use are straightforward. Manufacture of lumber creates waste in the form of sawdust, edgings, slabs, bark, and, on occasion, defective logs. Sawdust, edgings, slabs, and defective wood can go into particle board. After being peeled for plywood nearly 50 per cent of the log remains, which can be sawn into studs and/or chipped for pulp. The possible combinations are many.

The use of residues is essentially a joint product problem. Sawmilling, for example, produces two outputs, lumber and residuals. Unfortunately, these joint products are not generated in a fixed proportion, which leads to complications both for the design and operation of an integrated mill. The proportion of residuals and their suitability for alternative utilization depends upon the species, size, and quality of the sawlog. Evidently, the larger the mill, the more tolerant the pulping process, and the more flexible the sawing facilities the more likely that residuals can be used efficiently.

The obvious question at this point is whether these different production processes must be combined within one firm to effect these savings. The answer is yes--up to a point. There are obvious transportation savings when a sawmill is spatially integrated with a pulping operation, as chips and sawdust can be moved directly to the digestors. Currently there are arms' length transactions in residues but this is highly dependent on transportation charges. There are also problems in quality control of chips which are more manageable within an integrated unit.

MacMillan Bloedel's Powell River, Harmac, and Port Alberni facilities are multi-product operations and do benefit from residue utilization. For example, the Powell River complex combines both lumber and pulp production. Waste from the lumber mill is used for hog fuel, which in turn is used to generate steam and electricity, and as fibre input for the pulping process.

Flexibility in the allocation of logs to their highest value end use is the second economy associated with multi-product operations. In its decision about what to produce, the firm is confronted with two sources of uncertainty. First, the quality of the input is highly variable. Timber is an extremely heterogeneous commodity and despite extensive cruises (i.e., surveys) of stands to be cut, the actual quality of the logs often cannot be ascertained until they reach the sorting yards and in some instances not until they are processed.

The variability of the input can be increased by Forest Service cutting regulations. Imposition of close utilization standards (i.e., the removal of nearly all cover in an area) forces the firms to make use of what hitherto had been abandoned. Decadent wood, small diameter trees, and the like now have to be absorbed in the production process. Regulations also determine what areas can be cut and at what rate they must be cut in order not to jeopardize the firm's harvesting rights. These cutting schedules are in fact promulgated long before harvesting begins and must be adhered to, with some flexibility, regardless of market conditions.

Secondly, the firms confront extreme volatility in the price of one of their principal outputs--namely lumber. The problem is then to take an input of varying quality and from it manufacture products of the highest value when those products fluctuate in price. This is not easily resolved.

The multi-product firms may enjoy advantages in the extraction of maximum value from a given timber stand. For example, MacMillan Bloedel has developed a large linear programming model of their British Columbia operations. The model comprises 3,000 equations and inter-relates 7,500 variables by incorporating the following relationships: log availability in the firm by log characteristics (i.e., grade, diameter, source, species); logging costs; purchase and sale opportunities for logs and chips; transportation costs for logs, chips and hog fuel; product yields; production rates and capacities by mill and "machine centers"; production costs; product values and limits by markets; and residual transfers. In theory the program can take a timber stand and determine its destiny by directing it to the appropriate mill, determining how it will be processed and on what market it will be offered and in the process allocate its residuals.

The relevant question here is whether the multi-product firm through the internalization of resource-use decisions can extract more value from the input than would be the case in well developed competitive markets. In theory independent users of the input would bid against one another for the resource and those which could extract the highest end use value could and would outbid the others. We cannot say with certainty that intra-firm planning outperforms rationing by the market. H.R. MacMillan believed that competitive markets would lead to optimal allocation.

Competition should be maintained throughout the Coast district amongst those who can pay the highest prices for raw material. The result of such a policy will be to encourage the best use of all the forest crop and the greatest return from growing timber.¹²⁹

A further potential advantage of the spatially integrated multi-product and for that matter the vertically integrated operation involves economies of massed reserves.¹³⁰ The notion here is that in any production complex some proportion of machinery must be kept in reserve in anticipation of mechanical breakdowns. Furthermore, service and repair facilities must be maintained to ensure proper upkeep and to counter random machine failure. Both reserve capacity and maintenance facilities increase less than proportionally with the amount of machinery in use. Clearly, large complexes, such as the Powell River, Harmac, and Port Alberni operations, could benefit from such savings. For example, a part of the 1974-76 modernization program of the Powell River Plant was the centralization of maintenance and repair workshops.

MULTI-PLANT OPERATIONS

The third general type of scale economies is associated with multi-plant operation. These result from: "(1) economies of large scale management, (2) economies of large scale distribution, (3) pecuniary economies of large scale buying from suppliers".¹³¹

Economies of large scale management depend upon specialization of managerial tasks. The large firm can maintain accounting, finance, legal, labour relations, marketing and planning departments on the assumption that managers, like production workers, become more efficient when confronted with a narrow range of tasks.

The entire issue of economies of large scale management remains unsettled, not just in the forestry sector but for all industry. In his seminal work, Bain found little evidence of such economies.¹³² More recently, Scherer found that, with reference to centralized staff,

*the limited amount of evidence we obtained presents an unclear picture. That central staff costs are not fixed as firms move from single plant to multi-plant status was unmistakable. We identified a few cases in which the rise in costs was believed to be less than proportional to output, but the preponderance of evidence suggested that the largest firms have a higher unit administrative cost burden than small and medium-sized rivals.*¹³³

MacMillan Bloedel however, argues that it does enjoy economies in both marketing and centralized administration.

The large volume of forest products MB sells has enabled the Company to develop a worldwide marketing system at minimum unit sales costs. A complex sales organization of agents and subsidiary companies throughout the world has been created to serve the particular needs of each local market. For example, lumber is sold in ten Eastern American states through a wholly-owned subsidiary with twelve sales offices, eight warehouses and eleven cargo terminals. In the U.K.

and Japan, sales and distribution are handled through joint-venture companies with local partners. Pulp and paper products are sold through a sales organization based in Vancouver, which uses, where appropriate, agents or subsidiaries in other countries.

MB's network of sales agents and subsidiary companies keeps its head office in continuous contact with markets throughout the world and assists it in making long-term marketing plans in an attempt to maximize mill returns and ensure stability for both mill and customer. New markets can be opened when opportunities develop and existing markets can be expanded and services to them improved. With its existing large marketing network, MB has also been able to provide marketing services to smaller Canadian companies whose product volumes do not permit development of such a network....

One of the major strengths of a large company is its ability to employ specialists and experts in many fields which a small company cannot afford to do. MB has health experts, environment and ecology specialists, economic research analysts, strategic planners, labour relations experts and many other specialists whose contributions to the Company's success are vital. In its operating and staff departments the large scale of the Company's operations enables it to have specialists and experts with particular skills in many disciplines.¹³⁴

There are several sources of economies of large scale distribution. Firstly, given that the firm distributes its output over dispersed markets there are transportation savings from locating plants and distribution centres near customers.¹³⁵ This evidently explains, in part, the dispersion of MacMillan Bloedel's corrugated container plants and plywood distribution centres.

There are not, however, any distribution savings through the integration of linerboard and corrugated container manufacture.

The following testimony by Mr. A.G. Sexsmith of MacMillan Bloedel is to the effect that there are no economies of distribution involved in selling containerboard to a subsidiary company as compared with selling it to an independent converter:

Q. Do you consider there is any savings in distribution costs in selling to your subsidiary?

A. You mean over selling to somebody else?

Q. Yes? [sic]

A. No.

Q. It is about the same selling effort to sell your subsidiary as an independent firm?

A. Basically, it is contract selling. We sell a contract and you deliver according to that contract. You must give the same amount of service to your subsidiary, complaint, production, and deliverwise [sic] so there is the same amount of work.¹³⁶

Secondly, the multi-plant firm through control of its own transportation ~~needs~~ may be able to schedule them more efficiently by recognizing interactions between plants. With regard to the latter, Scherer found that:

it appears that, in at least a few cases, scheduling an integrated transport fleet to meet the needs of a multi-plant production network yields savings beyond those realizable in a single-plant framework, but the extent of multi-plant operation required is often modest and the integrated approach may be only a second-best solution reflecting the absence of competitive common carriage.¹³⁷

Because of its integration into transportation, MacMillan Bloedel is in a position to exploit these economies to the degree that they exist.¹³⁸

Pecuniary economies contributable to the multi-plant firm need not detain us here. As already explained (see note 120 of this chapter) they do not entail real savings of resources but rather involve a redistribution of income.

The existence and magnitude of economies associated with multi-plant operations is simply not well established. Bain, in his seminal work, found:

The economies of large multiplant firms are left in doubt by this investigation. In half the cases in which definite estimates were received, such economies were felt to be negligible or absent, whereas in most of the remainder of cases they seemed slight or small. Perhaps the frequently expressed suspicion that such economies generally are unimportant after all is supported, and perhaps we are justified in saying that we have had difficulty in accumulating convincing support for the proposition that in many industries production or distribution economies of large firms seriously encourage concentration or discourage entry.¹³⁹

In reference to Bain's work Scherer wrote, "The conclusion Bain draws from his pioneering effort is a modest, tentative one, but it is the best we have".¹⁴⁰

Eastman and Stykolt's empirical work directly supports the application of Bain's conclusions to the newsprint, linerboard and corrugated container industries. They found that "there are no economies to firms from operating more than one [newsprint] mill, [in linerboard] no cost advantages accrue to a multi-plant firm", and "there are no cost advantages from multi-plant operations [in shipping containers], other than the advantages of spreading risk by operating in more than one local market".¹⁴¹

It is painfully evident that in the preceding discussion of economies of vertical integration, multi-product operations, and multi-plant operations, we have been able to offer only scanty empirical support for our arguments. To draw conclusions from such limited evidence is extremely tenuous and therefore the following should not be viewed as immutable fact.

Apparently there are some very real economies of vertical integration especially in the combination of pulping and papermaking facilities where technological complementarity is significant. Other economies of vertical integration seem to be based on coordination of product flows between processes. The magnitude of these savings does not appear to be great.

In addition, there are economies of multi-product operation. The multi-product firm has definite advantages in the use of residues and perhaps some advantage in the flexibility with which it can allocate the raw material to the highest value end use.

Economies of multi-plant operations have, in other empirical studies, been shown to be of minor significance. No evidence has been forthcoming to indicate that multi-plant operation in the forestry sector would enjoy economies not found in these other studies.

EMPIRICAL FINDINGS

The critical question to be asked at this point is whether these non-plant specific economies of scale justify or explain the size of the firm. Our conclusion is that they do not, although we readily admit that it is only through the accumulation and analysis of much more data that a definitive statement can be made.

In its submission to the Royal Commission on Corporate Concentration, MacMillan Bloedel has attempted to substantiate the existence of these economies by using profitability as a proxy for efficiency and then showing a positive relationship between profitability and size. The analysis is questionable on both theoretical and empirical grounds. In their submission it is argued that the profitability of larger firms "results from lower costs...the larger forest companies are more efficient and hence more profitable".¹⁴²

Profit is the difference between costs and revenues and will obviously be greater, the lower the costs or the greater the revenue. The submission argues that "while many companies in the forest products industry are large,...few if any possess a dominant share of their market".¹⁴³ Without dominance, it argues, there is no influence over price. All firms, large and small, are confronted in every market with competitively determined prices. In no instance can a firm extract super-normal returns. Therefore, the greater profitability of large firms is due to lower costs. The analysis and evidence of the first sections of this chapter show unambiguously that the assumption of the non-existence of market dominance is patently unrealistic.

On the other hand the large firm may enjoy lower costs for two reasons. It may, as the submission argues, benefit from scale economies unavailable to smaller firms. However, it may also benefit from pecuniary economies in that it pays less for its inputs through the exertion of market power as a buyer. This would of course result in lower accounting costs and thus higher profits. Because the exploitation of such pecuniary economies simply implies the

redistribution of income from supplier to purchaser it is unclear whether society should encourage or even condone their exploitation.

The test for a relationship between profitability and size provided in the MacMillan Bloedel submission is simplistic. A sample of 15 major North American forest products firms is divided into three size classes based upon total assets. Average return on assets over the 1965-69 and the 1970-74 periods was calculated for each firm in each class. Then the average rate of return on assets was calculated for each size class and it was found that this average was greatest in the largest class. From this it was concluded that large firms are more profitable, and thus more efficient.

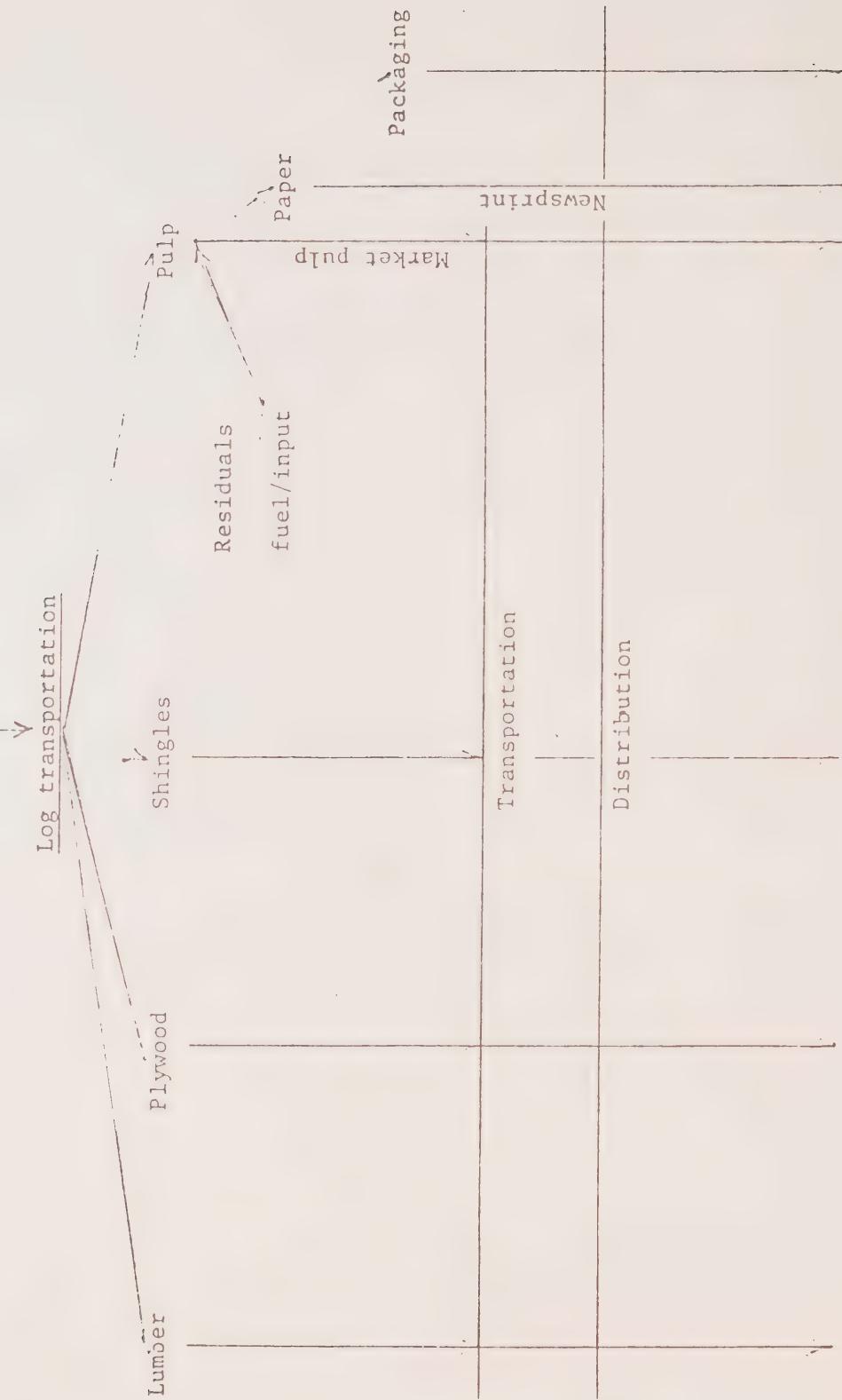
A good deal of research effort has gone into testing the hypothesis that size and profitability are correlated. One of the most sophisticated of these is the 1967 Hall and Weiss study ¹⁴⁴ which simultaneously considered the effects of seller concentration, size, and past output growth, and concluded that profitability was correlated with size. However they did not interpret this to mean that large firms were more efficient. Rather, they felt it was an indication that large size was related to capital requirement barriers to market entry and that these barriers explained the high profitability.

Using a crude version of the Hall and Weiss model we attempted to find a relationship between size and profitability and several other explanatory variables. A sample of 52 major forest products firms was constructed. Profitability was measured in terms of both the ratio of net profits to total assets and the ratio of net profits to total sales. Firm size was alternatively measured in terms of employment, sales, and production of pulp and paper. Market power was measured by eight firm seller concentration in the relevant pulp and paper market, and by the firm's size (in terms of output) relative to the size of the market in which it operates. An attempt to quantify diversification was made by including variables indicating each firm's proportion of total sales coming from pulp and the proportion coming from paper.

The results of these regressions were consistently disappointing. Tests for the significance of the size variable were poor and the portion of unexplained variation was high. Suffice it to say that a meaningful test of the relation between profitability and size requires a far more sophisticated model than that provided by the firm in its submission or by ourselves.

Figure 4

FOREST MANAGEMENT
TIMBER MANAGEMENT



SUPER-CONTROL

Just as our analysis of individual markets ignored scale economies beyond those attributable to the individual plant it also ignored market control beyond that of the individual firm. Only in several instances were links between firms pointed out, and these were generally selling contracts or joint ventures of an innocuous nature. However, some students of Canadian industrial organization believe that inventories of concentration ratios seriously underestimate actual concentration because of the existence of super-control groups which orchestrate the conduct of individual firms. Groups or organizations which are mentioned in this context include: individuals or families with stock holdings in ostensibly competing firms; financial institutions; trade associations; and institutions of government.

Understandably such super-control groups are often not highly visible. Even when a potential group is detected, the actual exercise of control can be extremely hard to ascertain. Our excursion into this area must therefore be viewed as a superficial review of the obvious.

We have found no evidence of ties between MacMillan Bloedel and other forest products firms based upon individual or family stockholdings. The importance of such groups is everywhere on the decline as the capital requirements of modern industrial corporations far exceed the fortunes of individuals or families. Some would argue that families in combination with foundations can continue to wield power through ownership of strategic blocks of shares in individual firms. Be that as it may, no such groups are evident with regard to MacMillan Bloedel.

There are, however, several instances of holdings by third parties of both MacMillan Bloedel and other forest products firms up to 1974. Norddeutsche Papierwerke G.M.B.H., a large West German paper manufacturer, held 48.9 per cent of MacMillan Rothesay Limited and was connected to Canadian Forest Products and Reed Paper through a joint venture in Takla Forest Products. This link was broken with MacMillan Bloedel's purchase of Norddeutsche's interests in the Rothesay operation. Canadian Pacific Investments holds a 12.3 per cent interest in MacMillan Bloedel, and controls Pacific Logging Company (which is connected with Doman Industries) and Great Lakes Paper Limited.

There are several other joint ventures of convenience. Pacific Logging, British Columbia Forest Products, and MacMillan Bloedel jointly own Forest Industries Flying Tankers Limited, an aerial fire suppression firm. MacMillan Bloedel, British Columbia Forest Products and Crown Zellerbach jointly hold Export Sales Company, Limited, which markets the firms' newsprint exports to Southeast Asia.¹⁴⁵

An historical relationship has existed between MacMillan Bloedel and British Columbia Forest Products, as it was in the late 1940's that H.R. MacMillan persuaded E.P. Taylor (Argus Corporation) to acquire a number of smaller sawmill and timber holding firms. The resultant firm, British Columbia Forest Products, lacked experienced management and sales outlets, problems which H.R. MacMillan resolved by loaning the firm several of his senior executives and by agreeing to market its output.¹⁴⁶ Some of these selling contracts endure to this day.

There is no reason to believe that these inter-corporate stock holdings confer control upon any group. MacMillan Bloedel is evidently a management controlled¹⁴⁷ corporation beholden to no outside super-control forces. In fact, when surveying the proliferation of joint ventures and intercorporate share holdings which characterize Canadian forest products firms, one is struck by the non-involvement of MacMillan Bloedel.

Financial institutions are another potential source of industry-wide coordination. The literature is replete with examples of the power of large banks in the direction of investment and output decisions in countries such as West Germany, France, and Italy.¹⁴⁸ One might well suspect similar behaviour in Canada when considering the level of concentration in the Canadian banking industry.¹⁴⁹

Our attempts to find a bank or group of banks with unusually strong ties to the forestry sector have come to nought. The Canadian Imperial Bank of Commerce is said to be "MB's Bank", however it does not seem to be especially linked with other forest products firms.

What is somewhat disturbing is the frequency with which the directors and executive officers of MacMillan Bloedel and competing forest products firms concurrently hold directorships or other executive positions in the leading financial institutions. Table II.41 on page 160 drawn from the Financial Post's Directory of Directors - 1976, shows just how common this phenomenon is. For example, at one time the Royal Bank of Canada had on its Board of Directors representatives of: MacMillan Bloedel; Abitibi Paper Company Limited; Bathurst Paper, Limited; Rolland Paper Company; Canadian International Paper Company; Maritime Paper Products, Limited; Minas Basin Pulp and Paper Company; Bowaters Mersey Paper Company; International Paper Sales Company Incorporated; Dover Mills Limited; and British Columbia Forest Products. And W.D.H. Gardiner, deputy chairman and executive Vice-President of the Royal Bank held directorships on the board of the East Asiatic Company (with 50 per cent holding of Tahsis) and Scott Paper Limited.

This of course does not imply that the Royal Bank acted to coordinate the behaviour of these firms nor that these directors ever placed themselves in a conflict of interest situation. However, it could reasonably be argued that the situation is one of unhealthy proximity.

Trade associations have in many countries, for many industries, at many points in time, served as super-control groups. They have been the vehicles of voluntary collusion and politically forced cartelization.¹⁵⁰ In Canada today their activities are the subject of Section 32, subsections (2) and (3) of the Combines Investigation Act, which explicitly allows certain activities and proscribes others.

Table II.42 lists the associations to which MacMillan Bloedel belongs, and presents no surprises. Some of the organizations are patently innocuous, such as the British Columbia Chamber of Commerce, others have in the past been associated with conspiracies in restraint of trade.¹⁵¹ Parenthetically, it may be noted that a good deal of data used in this study were taken from freely available material published by several of these associations. The Council of Forest Industries and the Canadian Pulp and Paper Association deserve mention in this regard.

A final group which has exercised super-control over industry includes various institutions of government. Currently in western Europe planning agencies of the state have been found to coordinate the activities of firms within the industries for which they are responsible.¹⁵² While we have already discussed the role of the Provincial government in the promulgation of resource management policies which have favoured the large integrated firms, we have found no evidence of direct governmental super-control.

On occasion governments have used state owned enterprises to influence conduct within certain industries.¹⁵³ While the Provincial government does have holdings in the forestry sector, we do not have any evidence to indicate that they have been used to induce changes in industry-wide structure, conduct or performance.

Summary

We have found no evidence to indicate that the family of forest products firms to which MacMillan Bloedel belongs is subject to the dictates of any super-control group, be it public or private.

Table II.41

REPRESENTATION OF FOREST PRODUCTS FIRMS ON BOARDS OF
DIRECTORS OF LEADING CANADIAN FINANCIAL INSTITUTIONS

The Canadian Imperial Bank of Commerce

D.W. Timmis (President and chief executive officer of MacMillan Bloedel up to March 1976; Director of Canadian Imperial Bank of Commerce.)

J.E. Richardson (Director of MacMillan Bloedel; Vice-President of the Canadian Imperial Bank of Commerce.)

Robert G. Rogers (President of Crown Zellerbach Canada, Ltd.; Director of the Canadian Imperial Bank of Commerce.)

Hon. J.P. Robarts (Director of Abitibi Paper Company; Director of the Canadian Imperial Bank of Commerce.)

Alfred Powis (Chairman of B.C. Forest Products; Vice-President of Northwood Pulp Limited, and Northwood Mills Limited; Director of Canadian Imperial Bank of Commerce.)

Marsh A. Cooper (Director of Abitibi Paper Company; Director of Canadian Imperial Bank of Commerce.)

The Bank of Nova Scotia

G.H.D. Hobbs (Director of MacMillan Bloedel; Director of the Bank of Nova Scotia.)

Thomas G. Rust (Chairman and Chief Executive Officer of Weyerhauser Canada, Limited; Director of the Bank of Nova Scotia.)

Alan M. McGavin (Director of B.C. Forest Products; Director of the Bank of Nova Scotia.)

Donald McLaren (Director of B.C. Forest Products; Director of the Bank of Nova Scotia.)

John J. Jodrey (Chairman and President of Minas Basin Pulp and Power Company Limited; Chairman and President of Canadian Keyes Fibre Company Limited; Chairman of Dartmouth Lumber Company; Chairman of Parrsboro Lumber Company Limited; Director of Annapolis Basin Pulp and Power Company Limited; Director of Dover Mills Limited; Director of Maritime Paper Products; Director of the Bank of Nova Scotia.)

Donald McInnes (Secretary and Director of Scott Maritimes Pulp Limited; Vice-President of the Bank of Nova Scotia.)

The Royal Bank of Canada

A.B. Christopher (Director of MacMillan Bloedel; Director of the Royal Bank.)

I.D. Sinclair (Director of MacMillan Bloedel; Vice-President of the Royal Bank.)

W.O. Twaits (Director of Abitibi Paper Company; Director of the Royal Bank.)

P.N. Thompson (Director of Consolidated Bathurst Paper Limited; Director of the Royal Bank.)

Pierre A. Salbaing (Director of Rolland Paper Company; Director of the Royal Bank.)

Claude Pratte (Director of Canadian International Paper Company; Director of the Royal Bank.)

Paul Pare (Director of Canadian International Paper Company; Director of the Royal Bank.)

Frank Manning Covert (President of Maritime Paper Products Limited; Director of Minas Basin Pulp and Paper Company; Director of Canadian Keyes Fibre Company Limited; Director of Bowaters Mersey Paper Company Limited; Director of the Royal Bank.)

Frank B. Common (Director of International Paper Sales Company Incorporated; Director of the Royal Bank.)

R.B. Cameron (Director of Dover Mills Limited; Director of the Royal Bank.)

T.J. Bell (Chairman and Chief Executive Officer of Abitibi Paper Company; Director of the Royal Bank.)

Ian A. Barclay (President and Chief Executive Officer of B.C. Forest Products Limited; Director of the Royal Bank.)

W.D.H. Gardiner (Deputy Chairman and Executive Vice-President of the Royal Bank; Director of the East Asiatic Company (Canada) Limited [Which owns 50 per cent of the Tahsis Company]; Director of Scott Paper Limited.)

Canada Trust Company

J.A. Taylor (Director of MacMillan Bloedel; Chairman of Canada Trust.)

J.V. Clyne (Director of MacMillan Bloedel; Director of Canada Trust.)

G.B. Currie (Chairman of MacMillan Bloedel up to March, 1976, Director of Canada Trust.)

W.J. Stenason (Director of MacMillan Bloedel; Vice-President of Great Lakes Paper Company Limited; Director of Canada Trust.)

Richard B. Wilson (Director of B.C. Forest Products; Director of Canada Trust.)

John Daniel Stevenson (Director of Prince Albert Pulp Company; Director of St. Anne Nacawic Pulp and Paper Company Limited; Director of McCarthy Milling Company Limited; Director of Meadow Lake Sawmill Company Limited; Director of Canada Trust.)

Huron and Erie Mortgage Corporation

J.A. Taylor (Director of MacMillan Bloedel; Chairman of Huron and Erie.)

J.V. Clyne (Director of MacMillan Bloedel; Director of Huron and Erie.)

Sun Life Assurance Company of Canada

I.D. Sinclair (Director of MacMillan Bloedel; Director of Sun Life.)

Alfred Powis (Chairman of B.C. Forest Products; Vice-President of Northwood Mills Limited and Northwood Pulp Limited; Director of Sun Life.)

H.M. Lank (Director of Bathurst Paper Limited; Director of Sun Life.)

G.A.R. Hart (Director of Bathurst Paper Limited; Director of Sun Life.)

H.R. Crabtree (Chairman of Howard Smith Paper Mills Limited; Director of Sun Life.)

F.M. Covert (President of Maritime Paper Products Limited; Director of Minas Basin Pulp and Paper Company; Director of Canadian Keyes Fibre Company Limited; Director of Bowaters Mersey Paper Company Limited; Director of Sun Life.)

The North American Life Assurance Company

J.N. Hyland (Director of MacMillan Bloedel; Director of North American Life.)

Commercial Life Assurance Company of Canada

J.E. Richardson (Director of MacMillan Bloedel, Director of Commercial Life.)

Halifax Insurance Company

J.E. Richardson (Director of MacMillan Bloedel; Director of Halifax Insurance.)

London Life Insurance Company

J. Allyn Taylor (Director of MacMillan Bloedel; Director of London Life.)

A.T. Lambert (Director of Canadian International Paper; Director of London Life.)

Table II.42

BUSINESS ORGANIZATIONS
TO WHICH MACMILLAN BLOEDEL BELONGS

American Paper Institute
260 Madison Avenue
New York, New York 10016

American Wood Council
1619 Massachusetts Avenue N.W.
Washington, D.C. 20036

British Columbia Chamber of Commerce
901 - 626 West Pender Street
Vancouver, B.C.

B.C. Maritime Employers Association
45 Dunlevy Street
Vancouver, B.C.

Canadian Chamber of Commerce
1080 Beaver Hall Hill
Montreal, P.Q.

Canadian Export Association
1020 - 1080 Beaver Hall Hill
Montreal, P.Q.

Canadian Manufacturers' Association
67 Yonge Street
Toronto, Ontario

Canadian Pulp and Paper Association
2300 Sun Life Building
Montreal, P.Q.

Canadian Wood Council
701 - 170 Laurier Avenue West
Ottawa, Ontario.

Council of Forest Industries
1050 West Hastings Street
Vancouver, B.C.

Federation Europeenne des Fabricants de Carton Ondule
37 rue d'Amsterdam
75008 Paris, France.

Fibre Box Association
224 South Michigan Avenue
Chicago, Illinois

Forest Engineering Research Institute of Canada
570 St. Johns' Boulevard
Pointe Claire, P.Q.

Forest Industrial Relations Ltd.
505 Burrard Street
Vancouver, B.C.

Fourdrinier Kraft Institute
280 Park Avenue
New York, N.Y.

National Forest Products Association
1619 Massachusetts Avenue N.W.
Washington, D.C.

Pacific Logging Congress
217 American Bank Building
Portland 5, Oregon

Technical Association of Pulp and Paper Industry
1 Dunwoody Park
Atlanta, Georgia

Vancouver Board of Trade
1177 West Hastings Street
Vancouver, B.C.

NOTES

1. Statistics Canada, Canadian Forestry Statistics, Ottawa, Information Canada, Catalogue 25-202.
2. The interested reader is referred to the voluminous output of the B.C. Royal Commission on Forest Resources and its predecessor the Task Force on Crown Timber Disposal. Of particular interest is the latter's study, Forest Tenures in B.C., which provides a valuable guide through the labyrinth of the tenure systems.
3. Actually, the TFL's are comprised of two types of land. These are "Schedule A" and "Schedule B". The former are Crown grants and OTT's which firms have voluntarily included in the management scheme of the TFL. Despite inclusion in the TFL these Schedule "A" lands continue to be subject to a number of the conditions of the original grant, most importantly they remain extremely secure.
4. Task Force on Crown Timber Disposal, Forest Tenures in B.C., Victoria, February, 1974, p. 44.
5. Minimum optimal scale is the level of output which the plant must reach to exploit all economies of scale. Expansion of output beyond this level results in constant or increasing per unit costs. For further discussion of this concept see J.S. Bain, Industrial Organization, 2nd edition, New York, Wiley & Sons, 1968, pp. 167-68.
6. Based upon the argument that the largest contractors have the specialized equipment needed for small log harvest. Crown Zellerbach, Submission to the Royal Commission on Forest Resources, Kamloops, September, 1975.
7. From data supplied by MacMillan Bloedel.
8. Statistics Canada, loc. cit.
9. This example, and in fact this entire section, borrows ruthlessly from J.S. Bain, Industrial Organization, 2nd edition, New York, Wiley & Sons, 1968, pp. 177-180.

10. R.E. Caves, "International Corporations: the Industrial Economics of Foreign Investment," Economica, Vol. 38, 1971, pp. 1-27.
11. Roger Hayter, "An Examination of Growth Patterns and Locational Behaviour of Multi-Plant Forest Product Corporations in British Columbia," unpublished doctoral thesis, 1974, University of Washington.
12. "Testimony before the Royal Commission on Forestry, 1946," (first Sloan Commission), Vol. 4, p. 30.
13. MacMillan Export Company, Submission to the Royal Commission on Forestry, 1946, p. 39.
14. Ibid., p. 38.
15. "Testimony before the Royal Commission on Forestry," op. cit., Vol. 12, par. 3822 (no pagination).
16. Ibid., para. 3744.
17. "Testimony before the Royal Commission on Forestry," Book 76, Nov. 7, 1955, p. 9091.
18. MacMillan Bloedel, Brief to the Royal Commission on Forestry, November, 1955, p. 9.
19. Ibid., pp. 10-11.
20. "Testimony before the Royal Commission on Forestry," Book 155, July 4, 1956.
21. The Truck Loggers Association, Brief Submitted to the Royal Commission on Forest Resources, Vancouver, November, 1975, p. 4. It should be noted that the firm contends that the PSYU's were not set up to sustain the independent loggers.
22. Ibid., p. 30
23. Personal interview.
24. Task Force on Crown Timber Disposal, Forest Tenures in B.C., Victoria, February, 1974, p. 124..

25. Task Force on Crown Timber Disposal, Timber Appraisal, Victoria, July, 1974, p. 185.
26. MacMillan Bloedel, Brief Submitted to the Royal Commission on Forest Resources, Vancouver, November, 1975, p. 168.
27. See Bain, op. cit., pp. 372-429 for a discussion of these dimensions.
28. Ibid., p. 379.
29. The "value" of the harvesting right is of course the discounted value of the stream of profits associated with the exercise of the harvesting licences. If the terms of the licence only allowed the firm to make a normal return on investment there would be little value attached to that right.
30. "When one looks at the past thirty years, what stands out in bold view is the unimpressive, if not shoddy, record of Government in managing the public forest land." Truck Loggers Association, loc. cit.
31. The survivor technique attempts to determine minimum optimal scale using a Darwinian approach. The researcher determines which size class of plant accounts for a growing proportion of industry output over time and concludes that this must be minimum optimal scale. Such methodology is flawed in that minimum optimal scale is a technical concept while choice of plant size can be influenced by a host of other forces. See George Stigler, "Monopoly and Oligopoly by Merger," American Economic Review, XL, May, 1950, and Joe. S. Bain, "Survival Ability as a Test of Efficiency," American Economic Review, LIX, May, 1969, for a thorough discussion of the issue.
32. T.M. Apsey, M.M. Garton, C. Hajdu, "Economic Trends in the Canadian Forest Products Industry," American Journal of Agricultural Economics, December, 1973, Vol. 55, p. 977.
33. Mead, W., Competition and Oligopoly in the Douglas Fir Industry, University of California Press, Los Angeles, 1969, p. 134.

34. MacMillan Bloedel, Brief Submitted to the Royal Commission on Forest Resources, Vancouver, 1975, p. 152.
35. J.S. Bain, op. cit., pp. 382-385.
36. J.A. Guthrie, G.R. Armstrong, Western Forest Industry and Economic Outlook, Johns Hopkin Press, Maryland, 1961, p. 135.
37. Crown Zellerbach Canada Ltd., Submission to the Royal Commission on Forest Resources, Vancouver, November, 1975, p. 24.
38. Data from annual reports, MacMillan Bloedel, and Crown Zellerbach, Submission to the Royal Commission on Forest Resources, Vancouver, November, 1975.
39. R.M. Bessom, "Competitive Marketing Strategies of Major American and Canadian Softwood Plywood Firms," unpublished doctoral thesis, University of Washington, 1965, p. 260. We have provided the identities of firms I, II, III, and IV.
40. Ibid., p.294.
41. "Probably" because it is based on the opinion of only two interviewees.
42. Bessom, op. cit., pp. 260-261.
43. National Association of Independent Building Materials' Distributors, (AID), Brief Submitted to the Royal Commission on Corporate Concentration, October 15, 1975, p. 6.
44. Ibid., p. 6.
45. Ibid., pp. 11-12.
46. Ibid., p. 8. Note that this concentration figure is higher than the estimate of Table II,15
47. MacMillan Bloedel, Submission to the Royal Commission on Corporate Concentration, December, 1975, p. 3-3.
48. AID, op. cit., p. 6.

49. The strength of the pulp, and of the paper subsequently manufactured from it, depends upon the length of the cellulose fibre. The longer the fibre the stronger the pulp or paper.
50. This odour is facetiously referred to as the "Tacoma aroma" in the Pacific Northwest in honour of Tacoma, Washington, the site of a number of Kraft mills.
51. This and the subsequent general data on pulp products are from the Canadian Pulp and Paper Association, 1975 Reference Tables, 29th edition, October, 1975.
52. Risto Eklund, "Integration of Forest Industries," Unasylva, Volume 21(2), No. 85, 1967, pp. 17-27.
53. Pemberton Securities, Submission to the Royal Commission on Forest Resources, Vancouver, December, 1975, p. 6 of Appendix.
54. Weyerhauser Canada Ltd., Supplementary Submission to the Royal Commission on Forest Resources, British Columbia, Vancouver, November, 1975, Appendix Table 10.
55. Crown Zellerbach Canada, Submission to the Royal Commission on Forest Resources, Vancouver, November, 1975, p. 28.
56. Weyerhauser Canada Ltd., Submission to the Royal Commission on Forest Resources, British Columbia, Kamloops, September, 1975, p. 6.
57. Representatives of MacMillan Bloedel's Pulp and Paper Group say this is too high but refuse to give the actual export figure.
58. J.A. Guthrie, An Economic Analysis of the Pulp and Paper Industry, Washington State University Press, Washington, 1972, p. 164.
59. Ibid., p. 162.
60. Stuart U. Rich, Marketing of Forest Products: Text and Cases, McGraw-Hill Co., New York, 1970, p. 482.
61. Guthrie, op. cit., p. 165.
62. Risto Eklund, op. cit., p. 21.

63. Crown Zellerbach, op. cit., p. 26.
64. Robert R. Peck, "TMP - Major Breakthrough in Mechanical Pulp Manufacture," Pulp and Paper, June, 1975, pp. 108-112.
65. Crown Zellerbach, loc. cit.
66. H.C. Eastman, S. Stykolt, The Tariff and Competition in Canada, MacMillan of Canada, Toronto, 1967, p. 256.
67. Eklund, op. cit., p. 21.
68. British Columbia Forest Products, Brief Submitted to the Royal Commission on Forest Resources, Vancouver, March, 1975, p. 16, "B.C. newsprint producers, due to freight rate structure, can only effectively compete in the western United States."
69. G.E. Anderson and T. Hopkins, "An Examination of North America's Daily Newspaper Industry," unpublished research paper, May, 1976, Burnaby, B.C. p. 24.
70. B.M. Owen, "Newspaper and Television Station Joint Ownership," Anti-trust Bulletin, Vol. 18, 1973, p. 794.
71. Anderson and Hopkins, loc. cit.
72. J.S. Bain, op. cit., p. 314.
73. J.A. Guthrie, op. cit., pp. 166-167.
74. F.M. Scherer, Industrial Market Structure and Economic Performance, Rand McNally, Chicago, 1970, p. 167. For a more thorough discussion of the price leadership issue see J.S. Bain, "Price Leaders, Barometers, and Kinks," Journal of Business, Vol. 33, July, 1960, pp. 193-203.
75. J.A. Guthrie, op. cit., pp. 167-174. Price changes taken from various issues of the New York Times.
76. "Two Follow Lead on Newsprint," The Vancouver Province, May 26, 1976, p. 17.
77. Scherer, op. cit., pp. 171-172.
78. J.S. Bain, Industrial Organization, 2nd edition, Wiley & Sons, New York, New York, 1968, p. 314.
79. J. Lyon, "Ottawa Conducts Major Probe into Pricing of Newsprint," Vancouver Sun, September 30, 1976, p. 1.
80. The rationale for the retention of this old capacity is explained in detail in Eastman and Stykolt, op. cit., pp. 261-265.
81. Canadian Pulp and Paper Association, Reference Tables 1975, 29th edition, October, 1975, Tables 37, 38, and 45.
82. Eklund, op. cit., p. 149.
83. Canadian Pulp and Paper Association, Submission to the Royal Commission on Corporate Concentration, November, 1975. p. 7.

84. See Scherer, et. al., op. cit.
85. Roughly ten per cent of the Canadian population resides in British Columbia.
86. Regina v. Howard Smith Paper Mills et al., 1955, O.R., 713, pages 726-732, Roach, J.A., delivering the judgement of the Ontario Court of Appeal.
86. Regina v. Howard Smith Paper Mills et al., 1955, O.R., 713, pages 726-732, Roach, J.A., delivering the judgement of the Ontario Court of Appeal
87. Statistics Canada, Printing, Publishing and Allied Industries - 1973, January, 1976, Ottawa, Catalogue 36-203, Table 1.
88. Canadian Pulp and Paper Association, Reference Tables 1975, 29th edition, October, 1975, Table V, p. 26.
89. Eastman and Stykolt, op. cit., p. 172.
90. Risto Eklund, op. cit., p. 21.
91. MacMillan Bloedel, A Submission to the Royal Commission on Corporate Concentration, December, 1975, pp. 3-5.
92. Canadian Pulp and Paper Association, Reference Tables 1975, op. cit., Table 37.
93. Statistics Canada, Corrugated Box Manufacturers, 1973, Ottawa, October, 1975, Table 8. We assume that because the western provinces produced 15 per cent of national output of corrugated containers that they consumed 15 per cent of total linerboard used in corrugating plants.
94. This finding is supported by Restrictive Trade Practices Commission, Report Concerning the Manufacture, Distribution, and Sale of Paperboard Shipping Containers and Related Products, Ottawa, Queen's Printer, 1962, p. 566.
95. MacMillan Bloedel, Submission to the Royal Commission on Corporate Concentration, Vancouver, December, 1975, pp. 3-5.
96. Alberta accounts for 28 per cent of the population of the four, and British Columbia for 40 per cent. Assuming that linerboard used is proportional to population, Alberta consumed 25 M tons and British Columbia 36 M tons in 1972. MacMillan Bloedel supplied roughly 32 per cent, or 11.5 M tons of British Columbia consumption. Total supplied by the firm was 38.6 M tons, leaving 27.1 M tons going primarily to Alberta.
97. Belkin Packaging began supplying the Alberta market from a new 90 M ton per annum capacity mill in December, 1976.
98. Statistics Canada, Corrugated Box Manufacturers, 1973, Ottawa, October, 1975, p. 10.
99. MacMillan Bloedel, personal communication.
100. MacMillan Bloedel, A Submission to the Royal Commission on Corporate Concentration, Vancouver, December, 1975, pp. 3-6.
101. Eastman and Stykolt, op. cit., p. 192.
102. Restrictive Trade Practice Commission, (hereafter RTPC) Report Concerning the Manufacture, Distribution, and Sale of Paperboard Shipping Containers and Related Products, Queen's Printer, Ottawa, 1962, p. 626.

103. Ibid., p. 630.
104. Ibid., p. 627.
105. Ibid., p. 630.
106. Eastman and Stykolt, op. cit., pp. 186-187.
107. MacMillan Bloedel, personal communication.
108. Ibid.
109. George Stigler, "The Case Against Big Business," Fortune, May, 1952, cited in John M. Vernon, Market Structure and Industrial Performance; A Review of Statistical Findings, Boston, Allyn and Bacon Press, 1972, pp. 104-105.
110. M.A. Adelman, "Comments on Books by Galbraith and Lilienthal," in Northwestern University Law Review, May-June, 1954, cited in Vernon, Ibid., p. 105.
111. Joseph Schumpeter, Capitalism, Socialism, and Democracy, 3rd edition, New York, Harper & Row, 1950, p. 106.
112. J.K. Galbraith, American Capitalism, revised edition, Boston, Houghton-Mifflin Co., 1956, pp. 86-88.
113. F.M. Scherer, op. cit., p. 361.
114. Edwin Mansfield, The Economics of Technological Change, New York, W.W. Norton & Co. Inc., 1968, p. 217.
115. F.M. Scherer, op. cit., pp. 377-378.
116. Mansfield, loc. cit.
117. U.S. National Science Foundation, Research and Development in Industry, cited in Harry Smith and Gilles Lessard, Forest Resources Research in Canada, Ottawa, Information Canada, 1970, pp. 112-113.
118. MacMillan Bloedel, Submission to the Royal Commission on Corporate Concentration, Vancouver, December, 1975, pp. 2-13.
119. Science Council of Canada, Seeing the Forest and the Trees, Ottawa, Queen's Printer, 1970, pp. 18-19.
120. Pecuniary economies are defined as cost savings with no real savings in the use of resources. For example, a large firm may have the power to force its suppliers to grant price concessions. This results in cost savings for the large firm but does not imply the use of fewer resources to produce a given output. See F.M. Scherer, op. cit., pp. 100-103.
121. MacMillan Bloedel, Submission to the Royal Commission on Corporate Concentration, December, 1975, pp. 2-11.

122. Risto Eklund, op. cit., p. 23.
123. MacMillan Bloedel, Submission to the Royal Commission on Corporate Concentration, Vancouver, December, 1975, pp. 2-11.
124. Risto Eklund, op. cit., p. 18.
125. RTPC, op. cit., p. 99.
126. RTPC, op. cit., p. 633.
127. Eastman and Stykolt, op. cit., p. 193.
128. Horizontal integration is defined as the operation of several plants producing the same output.
129. H.R. MacMillan, Brief Presented by H.R. MacMillan Before the Royal Commission on Forestry, August, 1944, p. 39.
130. See E.A.G. Robinson, The Structure of the Competitive Industry, Chicago, University of Chicago Press, 1958, p. 26.
131. J.S. Bain, Industrial Organization, 2nd edition, New York, Wiley & Sons, 1968, p. 170.
132. See J. S. Bain, Barriers to New Competition, Cambridge, Harvard University Press, 1956.
133. F.M. Scherer, et al. op. cit., pp. 323-324.
134. MacMillan Bloedel, Submission to the Royal Commission on Corporate Concentration, Vancouver, December, 1975, pp. 2-12 and 2-13.
135. J.S. Bain, Industrial Organization, 2nd edition, New York, Wiley & Sons, 1968, p. 170.
136. RTPC, op. cit., p. 99-100.
137. F.M. Scherer et al., op. cit., p. 272.
138. The substantial losses recently suffered by the firm in its transportation operations are in large part attributable to tonnage under charter in excess of the company's requirements for carriage of its own wood products.
139. J.S. Bain, "Economies of Scale, Concentration, and the Condition of Entry in Twenty Manufacturing Industries," American Economic Review, 44, March, 1954, p. 39.
140. F.M. Scherer, op. cit., p. 92.
141. Eastman and Stykolt, op. cit., pp. 256, 172, and 193.
142. MacMillan Bloedel, Submission to the Royal Commission on Corporate Concentration, Vancouver, December, 1975, pp. 2-5.
143. Ibid., p. 3-1.
144. M. Hall and L. Weiss, "Firm Size and Profitability," Review of Economics and Statistics, August, 1967, pp. 319-331.
145. Statistics Canada, Inter-corporate Ownership, 1972, Ottawa, November, 1974, Catalogue 61-513, occasional.

146. G.W. Taylor, Timber, A History of the Forest Industry in B.C., Vancouver, J.J. Douglas Ltd., 1975, pp. 169-170.
147. As defined by A. Berle and G. Means in The Modern Corporation and Private Property, New York, MacMillan, 1932.
148. R. Schwindt, "The Effects of Economic Integration on Industrial Structure - The Case of France, Italy and West Germany," unpublished Ph.D. thesis, Berkeley, 1973, pp. 165-178.
149. J. Dean and R. Schwindt, "Bank Act Revision in Canada: Past and Potential Effects on Market Structure and Competition," Banca Nazionale del Lavoro Quarterly Review, No. 116, March, 1976.
150. Schwindt, loc. cit.
151. The Canadian Pulp and Paper Association was involved in Regina v. Howard Smith Paper Mills, Ltd. et al., 1955, O.R., 713. Its Book and Writing Section served as the vehicle for the producers' conspiracy.
152. Schwindt, loc. cit.
153. An example is Italy's I.R.I., see Schwindt, op. cit., pp. 175-176.

A large portion of MacMillan Bloedel's Tree Farm License (TFL) 39 is located on the Queen Charlottes. This forest management licence incorporates about 25 per cent of the land area of the islands, and a comparable portion of the area's annual allowable timber cut. Other TFL's on the islands are owned by Crown Zellerbach Canada and Rayonier Canada.

Very little of the timber harvested in the Queen Charlottes is processed locally; only one small sawmill operates on the Islands. Traditionally, logs are transported by barge or boom to mills on the South Coast area.²¹ Following this pattern, logs harvested by MacMillan Bloedel on TFL 39 are transported to processing plants at Powell River or Nanaimo.

One group of island residents, the Skidegate Indian Band, has protested this ongoing export of raw materials from the Queen Charlottes, especially with reference to MacMillan Bloedel. The Band submitted a brief to the Royal Commission on Forest Resources outlining its viewpoint.

The submission and accompanying testimony argued that while logging in the TFL's does provide employment for the people of the Queen Charlottes, this employment is not secure. In the Band's opinion the community receives little of the benefits flowing from extraction of the island's resources, except in terms of wages. The Band requested that upon expiry of the current agreements, the Queen Charlotte TFL's be restructured, taken away from the present corporate holders, and given to the Skidegate Band.

Employees of the big companies earn a wage, but are denied benefits realized from the profits of their labour.... The continued employment of our people is at the mercy of the big companies. Tree Farm Licence 39 belongs to MacMillan Bloedel.... In theory MacMillan Bloedel could cut the block on our islands completely, provided they left sufficient wood standing below (sic) to maintain sustained yield overall. Employment to our people would be wiped out for fifty to one hundred years as we waited for our trees to grow back....

The best safeguard for long term employment and for the respect of the forests...is in granting village ownership of the Tree Farm Licences to keep our people employed and provide the village with needed revenues to provide services to our people.²²

During testimony at the hearings, a representative of the Skidegate Band remarked that:

If you live in the Queen Charlottes you see barge load after barge load going out with very little coming back into the community. This has been going on for 60 years and all we have is 60 miles of blacktop. And we have a ferry now.²³

During the testimony, it became clear that the band was primarily interested in receiving revenues from the TFL's, and not assuming the management responsibilities. Representatives of MacMillan Bloedel responded

to the Skidegate concerns about employment by demonstrating that the annual cut on the islands is approximately at the level that can be maintained in perpetuity.

It would not be unusual for a TFL to be granted to a community, since three of these licenses are held by municipalities at present. However, it would be unprecedented for a TFL to be completely or partially taken from a current holder and given to another group, since the agreements are legal documents with specific renewal rights. Moreover, it may not be in the provincial economic interest to redistribute forest tenure rights in order to shore up the economies of isolated communities. Economic efficiency would likely be sacrificed for regional development goals.²⁴

Since no interviews were conducted in the Queen Charlotte area, it cannot be determined whether sentiments expressed by the Skidegate Band Council are representative of opinions held by most residents of the Queen Charlotte Islands. Nevertheless, it seems evident that the low level of economic development in the Queen Charlottes can partially be attributed to the lack of processing facilities for local forest resources.²⁵ This situation results from having large central processing facilities on the southern British Columbia coast. In other words, the degree of economic development enjoyed by the residents of Powell River occurs to some degree at the expense of Queen Charlotte residents.

RESOURCE POLICIES

Because MacMillan Bloedel is the largest corporate user of British Columbia's natural resource base, its resource policies are both significant and influential. This is especially true when one considers that ownership of the majority of provincial forest land is retained by the Crown. Much of MacMillan Bloedel's timber supply is therefore obtained through long term agreements or "tenures" from the provincial government. Provincial requirements regarding forest tenures, environmental practices or land use management have major effects on the firm's profits, so it is important to determine how MacMillan Bloedel has interacted with government agencies on these matters.

First, this section provides a review of the firm's policies regarding forest tenures. Changes in these tenure policies and MacMillan Bloedel's reaction to these changes are documented. Next the company's positions on environmental issues are discussed. Finally, MacMillan Bloedel's land use policies and management performance are outlined.

TENURE POLICIES

As discussed in detail earlier, the tenure system, which sets out the terms upon which the Crown grants access to the forest to private forest products firms, is of great importance both to the public and to the industry. As was shown, MacMillan Bloedel has done extremely well under the system, accumulating more of the most desirable cutting rights than any other firm operating on the Coast.

Some of the major governmental decisions shaping the current tenure system were made at the recommendation of two provincial Royal Commissions, one of which was completed in 1946 and a second in 1956. The latest Royal Commission investigating the British Columbia forest industry began in 1975, and completed its work in 1976. Submissions made by MacMillan Bloedel and its predecessors to these Royal Commissions reveal the evolution of the company's position on the forest tenure system. Interesting comparisons can be made of major changes in the firm's attitudes towards these tenures as it grew to its present dominant position. These attitudes are analyzed below with enough background information to give context to the discussion. While these Royal Commissions investigated many other aspects of forest policy in addition to the tenure system, only tenure issues are discussed here because of their paramount importance to the industry.

1946 Sloan Commission

This major forestry Royal Commission was undertaken at a time when there was little long term forest management in British Columbia. That is, the annual cut was unregulated, replanting was sporadic, and there were no provisions for long term forest tenures which extended beyond the first cut.²⁶

By that period, i.e. the mid-1940's, the concept of "sustained yield" forest management had become well known among resource managers. Sustained yield, as defined by Justice Sloan, the sole Commissioner, meant "a perpetual yield of wood from regional areas in equal or increasing volumes." Thus sustained yield management involves planning the harvest, replanting, and regeneration of a region's forests so that approximately the same amount is harvested in each time period as is grown. Essentially, the task confronting the Sloan Commission was to determine the most rational and expedient way to establish sustained yield management of the province's forest lands.

The Commission could have allocated the responsibility for forest management to one or a combination of three groups: the provincial Forest Service, the large corporate forest products companies, or the small companies. After much consideration, the Commissioner recommended that long term forest management become the shared responsibility of the private forest products firms and the Forest Service. Major companies were given exclusive long term management responsibilities and harvesting rights over large tracts of public timber, usually combined with the firm's private holdings in a given area. Originally, some of these licenses were also awarded to smaller firms and family companies, but all were ultimately purchased by the large firms. These arrangements were originally termed Forest Management Licenses and are now referred to as Tree Farm Licenses. Areas not included in the TFL's are now termed Public Sustained Yield Units (PSYU's) and managed on a sustained yield basis by the Forest Service. These PSYU's were originally intended for exploitation by small independent firms, yet at present ten large integrated companies account for 57 per cent of the annual cut in the Coast Region.²⁷

Thus Commissioner Sloan envisioned a combination of private and public management for British Columbia's forests. This decision was a crucial one with long term significance, in that the Forest Management Licenses (now TFL's) involved turning over large blocks of public timber to individual firms for long, occasionally indefinite, periods of time. In these areas, individual firms supplanted public managers, and were given the opportunity to act essentially as private owners of the forest resource, while required to obtain approval of logging plans and make royalty payments. For a number of reasons, this TFL system has drawn much criticism in the province at various times.²⁸

A variety of reasons have been advanced as to the motivation for Justice Sloan's recommendation encouraging major corporate participation in the management of provincial forest lands. Submissions to later Royal Commissions indicate that one of the main goals of the FML system was to attract capital to the province in the form of processing facilities. In fact, many FML's were granted with "appurtenant" clauses, which required the construction of processing plants.²⁹ Testimony before the 1946 Commission indicated that many people believed the small logging companies had too short a time horizon, and lacked the planning expertise required for sustained yield management.³⁰

More importantly, R. Orchard, the Chief Forester of the province and one of Justice Sloan's advisors, apparently had misgivings about the ability of the Forest Service to adequately manage the whole provincial forest. Personal interviews suggest that Orchard believed the political decision makers of the day would not have funded the Forest Service to the level required to maintain sustained yield management throughout the province. Another opinion, advanced in a radical critique of British Columbia forest policies, was that a strong commonality of interest existed between Forest Service officials and the large forest product companies at that time, which led to similar viewpoints regarding future management of the provincial forests.³¹

Whatever his motivation may have been, Justice Sloan's decision to allow significant industry management of the resource has had important implications for the nature of the industry, and worked to the advantage of large firms. H.R. MacMillan did not at that time support the establishment of the TFL system. In his submission to the 1946 Royal Commission, MacMillan stated that he saw no need to change the conditions of tenure or costs on lands already alienated. He did suggest that the current owners should be allowed to retain their logged land for the next forest crop to encourage replanting and sustained yield management, but made no mention of licensing large tracts of public lands to individual firms.³²

His position contrasted with the views of other large companies including Bloedel, Stewart, and Welsh, one of MacMillan Bloedel's predecessors. Their brief to the Royal Commission pointed out a belief that "private working circles" (later TFL's) should be established which combine public and private-held timber under long term management by private firms.³³ This opinion was commonly held by industry leaders as well as the Chief Forester of the province.³⁴

1956 Sloan Commission

The second Sloan Commission was called to review and analyze the results of legislation introduced at the recommendation of the 1946 Royal Commission. That is, the 1956 Royal Commission investigated the effects of Forest Management Licenses and Public Working Circles upon the industry, as well as many other issues.

By 1955, a total of 21 Forest Management Licenses, had been granted to private firms, nearly all in the Vancouver Forest District. The H.R. MacMillan Export Company and Bloedel, Stewart and Welsh had merged in 1951 to form MacMillan and Bloedel, Ltd. MacMillan and Bloedel had been granted two Forest Management Licenses by the time the second Sloan Commission began hearings in 1955.

Opinions on the tenure system offered by H.R. MacMillan in his brief to the 1956 Royal Commission were outspoken and controversial. MacMillan stated that his firm adamantly opposed the establishment of any more Forest Management Licenses in the Vancouver Forest District. In his opinion, the Vancouver Forest District was being overcut at that time, and to bring the cut into alignment with the allowable annual cut, a rigorous program of reforestation and planning was required. The commitment of more large blocks of public timber to private firms in the form of Forest Management Licenses would reduce the amount available in Public Working Circles to be distributed by the market. He was not opposed to new Forest Management Licenses outside the Vancouver Forest District.³⁵

The MacMillan and Bloedel brief to the 1956 Commission is especially notable in that it contains extensive passages extolling the virtues and benefits of competition as a mechanism for allocating the rights to public timber. According to his submission, MacMillan believed the positions of both small loggers and small mills should be protected by maintaining as large a Public Working Circle forest as possible. At that time, timber sales in public areas were auctioned by competitive bids. In the words of MacMillan:

...no fair-minded Canadian would desire to see these small operators crushed for the benefit of a few.... Public Working Circles provide equal access to all Timber Sales by all who want logs.

Nothing could be fairer.

Competition protects public revenue.

The cut is not...reserved for a favoured few.

Those who are the most hungry for any logs can get them by outbidding the others. Our present economy will survive as long as...the Crown Forests can be reached and acquired by the hundreds of operators who earn their livelihood there....

Vancouver Forest District has now reached the stage where new wood consuming industries are no longer needed. No bonus in the form of Forest Management License needs to be expended by the public to start anybody else in business in the District.

*Those who urge the contrary do so in fear of the fate which may be in store for them if they fail to maintain their efficiency and bear the brunt of the competition of their peers.... What they want is "most-favoured company" treatment, favoured by Government, with the objective that they will be awarded all the timber they could ever need even though the result will be that the competitors will be correspondingly reduced, and other wood consumers, less powerful, less crafty, but just as good Canadians, will be put out of business.*³⁶

MacMillan's stance generated much controversy at the hearings of the Sloan Commission. Two of his company's major competitors had not yet applied for Forest Management Licenses in the Vancouver Forest District, but were in the process of doing so. Other companies, including MacMillan and Bloedel, already held or were about to be awarded these very desirable and secure forms of forest tenure. MacMillan's position was therefore criticized by many as being a strategy move to prevent his competitors from obtaining the rights to large portions of public forests, since his company already controlled licenses in the Vancouver Forest District.³⁷

Other individuals maintain that MacMillan did in fact have a genuine concern for the plight of the small logger and a strong belief in the efficiency of competitive markets, even though his firm was the largest holder of Forest Management Licenses, which insulated MacMillan Bloedel from "bearing the brunt of the competition of its peers."

1975 Pearse Commission

This Forestry Royal Commission was struck in early 1975 to investigate all aspects of the current state of the British Columbia forest industry; Dr. P. Pearse was appointed as sole Commissioner. Hearings were conducted throughout the second half of 1975, and submissions were received from groups concerned with all phases of forest utilization.

MacMillan Bloedel, Ltd. made three submissions to this Royal Commission, as well as questioning witnesses and supplying testimony by the firm's chief officers. Due to this participation, the positions of MacMillan Bloedel on important issues facing this Royal Commission are well documented.

The MacMillan Bloedel briefs to the Pearse Commission are based on two major premises. First, that there are no economic, social or technical justifications for increased government intervention into the operations

of the forest industry, and second, that there is no crisis in the present tenure system. The brief states that the current procedures and tenure system serve "the public interest." However, the company does perceive a "crisis in government administration which has eroded the competitive position of the industry."³⁸

These briefs commented extensively on the current tenure system. The TFL agreements are a "genuine success story which has not been duplicated in the free world" in that the objectives sought in establishing TFL's have been accomplished. The company was of the opinion that new allocations of timber should be in the form of TFL's whenever possible. A number of specific recommendations concerning TFL's were made in the submissions; almost all of these recommendations would serve to reduce the degree of control and influence in TFL management currently exerted by the provincial Forest Service. Also, the company recommended that the term of these agreements be made longer and more secure.³⁹

One major issue of contention that arose during hearings of this Commission was the duration of Tree Farm Licenses. Three of MacMillan Bloedel's Tree Farm Licenses granted before 1956 were originally termed "perpetual"; that is, rights to manage and harvest these areas on a sustained yield basis were granted to the company in perpetuity, and were not subject to renewal or review by the Forest Service. After 1956, at the recommendation of Justice Sloan, new TFL's were granted for a 21-year period and were renewable after that time. In the early 1960's the Forest Service established the policy that those licenses formerly termed perpetual would have a 21-year renewal period, in the same manner as all other TFL's. This policy received attention during testimony to the Pearse Commission, and drew extensive, severe criticism from MacMillan Bloedel.⁴⁰ It was later pointed out that the new policy did not imply that MacMillan Bloedel's TFL's would be necessarily cancelled; rather, the license would be subject to renewal after 21 years.⁴¹

Some of the most significant recommendations made by MacMillan Bloedel deal with timber allocations in PSYU's (formerly Public Working Circles). As discussed previously, many recommendations were made on this same topic to the 1956 Royal Commission. It is noteworthy that the recent recommendations differ radically from those made in 1956.

After the 1956 Sloan Commission, a system of "quotas" was established in the allocation of timber sales in PSYU's. While perhaps serving other socially desirable functions, this quota system has considerably reduced viable price competition in public timber sales by limiting the entry of purchasers. These "quotas" have developed into an informal tenure arrangement protecting existing operators in PSYU's. Even though the company holds only minor PSYU quotas, the MacMillan Bloedel brief deals extensively with this topic. Their major recommendations were that quotas should be granted legal status as a form of tenure in PSYU's, and that the terms of sale under these quotas should be longer than at present. Also, these quotas should be completely transferable and saleable.⁴²

The MacMillan Bloedel recommendations directly contradict those made by H.R. MacMillan in 1956. MacMillan opposed the licensing of bidders in PSYU's, which is approximately the same procedure as the quota system, because it would restrict competition.

*We do not see why some citizens should be allowed to bid and others prevented directly or indirectly from bidding...the utmost free competition should be encouraged to protect Public revenue and ensure that the wood goes to those who want it most....*⁴³

The MacMillan Bloedel policy on tenures in PSYU's has in fact reversed completely in 20 years.

This change is perhaps indicative of the direction in which MacMillan Bloedel tenure policy has moved. Nearly all recommendations on the tenure system made by MacMillan Bloedel to the 1975 Royal Commission would serve to minimize the discretion and influence of the Forest Service in the administration of tenures, or to extend the terms of tenures and make them more secure. The company would prefer that it (and the other British Columbia forest industry firms) could operate more in the manner of resource owners rather than as users of public timber. As its rationale, the company maintains that security of tenure is required to attract investment, and that Forest Service procedures are costly and overly bureaucratic.⁴⁴

Another possible reason for adoption of this stance is that many aspects of British Columbia forest administration have been under review; first by the Forest Service itself, also by a Task Force in 1974, and finally by the Pearse Royal Commission. A major movement away from the status quo in the terms of tenure could well have a disadvantageous impact on MacMillan Bloedel, which is by far the largest and most resource-rich forest products company in the province.

ENVIRONMENTAL POLICIES

Two broad environmental issues have caused friction between government and industry in recent years. The first of these, the environmental logging guidelines, were issued by the Forest Service in 1972 to promote logging practices which minimize impacts on other forest uses. The second issue involves environmental controls placed on processing facilities, particularly pulp mills. MacMillan Bloedel has made representations to the provincial government on both these issues.

Environmental Logging Guidelines

In 1972, the provincial Forest Service issued a set of logging guidelines to be followed by the industry, in response to increasing evidence that progressive clear-cutting had decreased environmental quality in certain areas. These guidelines generally require that "logging operations must be planned and conducted in such a way that potential deleterious effects on the environment are minimized." Major goals include the

protection of water quality, fish and wildlife habitat and recreational uses.⁴⁵ In other words, the guidelines are a step towards multiple use management of the provincial forests.

In order to minimize logging impacts, the guidelines call for smaller and more dispersed clear cut openings in the provincial forests, with areas adjacent to those logged deferred from cutting for a period of years. Clear cut areas should not exceed 200 acres according to the guidelines.⁴⁶

The major effects of these guidelines upon the industry are two-fold; the area available for logging in any time period is significantly reduced, and the amount of road building required is significantly increased. Road building and planning costs are paid by the firm but are then deducted from the provincial stumpage charge as a cost of production. However, there is no reimbursement of interest charges on funds borrowed for road construction and therefore the guidelines resulted in higher real costs for the logging firms.

While at least partially agreeing with the principle of the guidelines, industry leaders have many objections to their application; the MacMillan Bloedel position is typical of those expressed by forest industry firms. In a letter to the provincial Minister of Lands, Forest and Water Resources, MacMillan Bloedel raised four major concerns relating to application of the guidelines. Most importantly, the company believes that the guidelines are not being applied in relation to the values of the resources being protected. In MacMillan Bloedel's opinion, the industry (and ultimately the public) is bearing high costs in terms of increased road building and reduced amounts of developed timber available for logging, even though the fish and wildlife values of a given area may not merit such expenditures. Moreover the company claims it suffers a loss of flexibility in its operations due to the new development pattern.⁴⁷

Also, the system for processing cutting plans by the responsible provincial agencies is claimed to be extremely slow and costly. Timber margins are being increased by two to four times, which, the firm contends, increases the risk of wind thrown tree damage. And finally, the increased density of forest roads will worsen siltation in streams, according to MacMillan Bloedel.

As solutions to these difficulties, the firm made the following recommendations: that the review system be streamlined, that one government agency (the Forest Service) be appointed final decision-maker in cases of disagreement between agencies, and that the guidelines be applied in relation to the values being protected, giving full consideration to the forest industry's costs and to timber value.⁴⁸

At present, these logging guidelines are still in effect in the same form as established in 1972, although changes are occurring in their administration. MacMillan Bloedel has continued to object to their application, since implementation of these guidelines "significantly increase(s) capital expenditures...required to continue logging at current levels."⁴⁹

Pollution Control Requirements

In 1970, hearings were held by the provincial Pollution Control Branch which reviewed pollution standards for the British Columbia forest industry. A primary reason for calling these hearings was to elicit information from concerned groups as to how effluent standards should be set for the pulp and paper industry.

MacMillan Bloedel did not make an individual submission to this inquiry. Rather, the company's position was represented (along with other industry members') in a brief by the Council of Forest Industries. In its submission, the Council outlined a plan for management of effluents. Briefly, it called for setting waste levels on a plant by plant basis, based on the management plans of the individual companies. The Council wanted to avoid the setting of effluent standards which applied uniformly to all plants in the province since many older pulp mills would require extensive capital expenditures. The industry also opposed public hearings on applications for new plants.⁵⁰

In May of 1971, a preliminary set of objectives was distributed to all groups making submissions to the inquiry, in order to elicit responses. The forest industry protested that some of the proposed standards were "technically unobtainable and economically unthinkable." After consultation with industry representatives, many standards were revised downwards.⁵¹

The results of this process were the set of pollution standards adopted by the province in 1971. Various interest groups reacted quite differently to the new standards. The Council of Forest Industries maintained that the provincial economy would be seriously impaired by the objectives,⁵² while an environmental spokesman said the objectives bore no relation to the recommendations made by his group at the hearings.⁵³

In 1976, a second public inquiry was held by the provincial Pollution Control Branch to review the objectives set five years earlier. The Council of Forest Industries again submitted a brief. A main point made in his brief was that the present set of objectives and the methods developed for regulation had numerous advantages and should remain unchanged. The Council wanted to avoid the possibility that the structure of the objectives might be changed just as its industry members were spending large sums of money to meet them.⁵⁴

MacMillan Bloedel also made an additional submission to the 1976 inquiry which summarizes the firm's activities in pollution control. As stated in the submission, MacMillan Bloedel recognizes pollution abatement as one of its prime responsibilities and has undertaken active control programs for many years. It has reduced nearly all kinds of industrial effluents, as required by the 1971 pollution control objectives. By 1980, the company expects to have discharges reduced to the point of compliance with 'Level B' objectives (the highest required for existing facilities) and in some instances, to Level A objectives (the level required for new facilities).⁵⁵

The company's capital expenditures for pollution abatement have increased from \$4.2 million in 1972 to \$9.5 million in 1974. This spending amounted to about 10 per cent of total capital expenditures over that three year period, according to MacMillan Bloedel. Operating costs of pollution control increased from \$.87 million in 1972 to \$3.0 million in 1974. The firm has stated that it believes it should seek to minimize adverse effects from its operations, but that expenditures of large sums of money for pollution control involve social costs in the form of higher prices. The government should strike a balance between the benefits of environmental regulations and the costs involved, in the opinion of MacMillan Bloedel.⁵⁶

Other Environmental Issues

MacMillan Bloedel has been involved in few other issues or confrontations regarding environmental degradation in British Columbia. The company was charged both in 1974 and 1975 with contravening the federal Fisheries Act by..."polluting water frequented by fish." One of these charges, for damaging a salmon stream during logging road construction, was later withdrawn.⁵⁷ Occasionally, some local opposition to the company's activities has been mounted by anti-pollution groups in communities where MacMillan Bloedel has processing facilities.⁵⁸

Conclusion

Regarding the environmental issues discussed in this section, it seems that MacMillan Bloedel's policy has been one of guarded cooperation. The company has continually objected to application of the logging guidelines, which it considers to be unjustifiably costly and inflexible. On the other hand, the company apparently supports the pollution control objectives, which it has termed "...not unexpected, punitive or unduly severe in comparison with regulations in effect elsewhere."⁵⁹ Perhaps an address given in 1972 to the Canadian Pulp and Paper Association by then Vice-President, Denis Timmis, best summarizes the company's position on environmental issues. Timmis stated that he believed:

...environmental matters (have) evolved in a deep and widespread concern on the part of the public... (which is expressed in) dissatisfaction with existing conditions. In the face of these expectations, the industry must accelerate its steps to head off public disillusionment and scepticism.... The industry has an obligation to operate in a manner consistent with prevailing attitudes about protection of the environment.... That is not too much to ask of us, and in the final analysis what other options have we?⁶⁰

LAND USE POLICIES AND PERFORMANCE

The activities of MacMillan Bloedel as a manager of forest lands in British Columbia are extremely significant, since the company administers the use of 3.5 million acres of public (and private) forests in the British Columbia coastal region. Lands managed by MacMillan Bloedel are in many cases located in proximity to the dense population centres of

British Columbia's Lower Mainland, which makes these areas more valuable for alternative forest uses such as recreation or wildlife management. Thus, the potential for land use conflicts involving MacMillan Bloedel is great.

Certain points should be established at the outset of this discussion. Questions of land use and resource allocation are often contentious issues, since various segments of society have conflicting opinions regarding the relative social values of different uses. The firm contends that at times land use conflicts involve jurisdictional disputes between government agencies which have responsibility for protecting competing resource uses. For example, in attempting to cooperate with the desires of the Provincial Fish and Wildlife Branch, the firm has at times encountered resistance from the provincial Forest Service. The extent of this type of intergovernmental friction is evident in the provincial government's lack of a clear, workable procedure for determining optimal resource use in a given area. Forest industry firms have no legal right or justification to manage TFL lands for purposes other than timber production, even though such management is clearly required. Thus MacMillan Bloedel has in many respects been operating as a land manager without the benefit of a well articulated public policy on resource uses.

MacMillan Bloedel Land Use Policy

Public demand for recreational access to the forest industry's tenured lands has increased in recent years. As yet, no comprehensive policy has been issued by the provincial resource agencies regarding public use of forest areas managed by private firms. In response to this void, MacMillan Bloedel adopted its own Land Use Policy in 1971, which deals with multiple use of its tenured forest holdings.

As outlined by MacMillan Bloedel, major objectives of its land use policy are:

1. *Where compatible with the primary use of lands for growing timber, to recognize other values and make all reasonable efforts to preserve or enhance them in the course of harvesting, restocking, and tending the forest.*
2. *To facilitate other uses of forest lands in order to minimize the demand for withdrawals of lands from timber production for single-use purposes.*⁶¹

(emphasis added)

In this land use plan, policies and procedures are outlined regarding public access, recreational and aesthetic considerations, fish and wildlife, water quality, and other resource uses. Generally, the policy outlines the positions MacMillan Bloedel follows with respect to multiple use of public lands under its forest management jurisdiction.

To help make this land use policy operational, the company has established a Land Use Planning Advisory Team (LUPAT). The team is comprised of six wildlife, fish and soils scientists, and one technician. They act as advisors to MacMillan Bloedel's logging division managers in formulating logging plans which minimize adverse environmental impacts.⁶²

Both MacMillan Bloedel's Land Use Policy and LUPAT are unusual (though not unique) in the British Columbia forest industry. For these reasons the company is considered by many observers to be a relatively responsible and innovative resource manager. However, conflicting viewpoints do exist regarding MacMillan Bloedel's land use policies and procedures.

As pointed out by a British Columbia Forest Service official, MacMillan Bloedel's management policies and land use team operate from the company's viewpoint rather than the public's. MacMillan Bloedel's stated purpose is to allow multiple use where compatible with timber harvest, a viewpoint which may or may not agree with society's ranking of land use preferences in a given area. Yet the public at least partially pays the cost of these management programs through deductions from stumpage charges. Furthermore, representatives of the British Columbia Fish and Wildlife Branch remarked that the MacMillan Bloedel land use policy evolved in response to mounting public pressure. Because of the commercial forestry orientation of this land use policy, it has not served to eliminate land use conflicts involving MacMillan Bloedel, as discussed in the next section.

Land Use Conflicts

Despite its stated Land Use Policy, MacMillan Bloedel has been involved in a number of land use conflicts in the British Columbia coastal region. These conflicts are not surprising, since public demands for alternative forest uses such as wildlife management and public recreation have increased in recent years. They become even less surprising in light of the firm's control of extensive areas in proximity to the population centres of the Lower Mainland and Vancouver Island. Further, it should be pointed out that land use conflicts in the British Columbia forestry sector are not unique to MacMillan Bloedel; such conflicts occur to varying degrees with other firms.

Probably the most significant and publicized conflict has been over the Tsitika-Schoen area, which is comprised of about 300,000 acres of forest lands in two river drainages on the northeast corner of Vancouver Island. The area constitutes an almost untouched "buffer zone" of wilderness between extensively logged areas to the north and south. Large portions of the Tsitika-Schoen area are located within MacMillan Bloedel's TFL 39.

Controversy over the future of the area arose in 1972 when an ecological reserve was proposed by the British Columbia Fish and Wildlife Branch to encompass 125,000 acres of the Tsitika River watershed. Soon thereafter an old proposal for a provincial park in the area was raised. Both MacMillan Bloedel and Canadian Forest Products Ltd. (the holder of

another TFL in the area) responded to these proposals by pointing out the value of these forests for industrial uses, and the losses of employment and income likely to occur if these reserves were established. The issue soon became the traditional preservation versus resource extraction argument, and a development moratorium was placed over the whole of the Tsitika River and Schoen Lake areas.

In 1973 an interdepartmental study of the Tsitika-Schoen controversy was announced. This study attempted to gather and interpret information from provincial agencies, the involved forest industry firms, conservation groups and local residents in order to develop courses of action for the area's future. The study group identified four options with regard to the area's management; complete industrial use, complete protection, or two possibilities of combined ecological reserves, research areas and industrial forestry.⁶³

MacMillan Bloedel made an extensive submission to the Tsitika-Schoen committee which outlined its views on the area's development. Briefly, the company argued that the economic costs of such drastic withdrawals from the industrial forest base would have a major adverse effect on the residents of North Vancouver Island. The company called for a fifth option, differing from all of the four outlined above, which would include management of the area under a "multi-resource plan with primary emphasis on timber production." Potentially high-use recreation areas would be maintained, and a number of relatively small ecological reserves established in certain areas. The company also proposed a joint MacMillan Bloedel-government environmental logging research program for parts of the area.⁶⁴

The MacMillan Bloedel plan for management was received with criticism by some groups interested in the area's future. Conservationists and biologists involved in the conflict compared the MacMillan Bloedel proposal unfavorably with an alternative proposal suggested by Canadian Forest Products Ltd. for the portion of the area under their jurisdiction.⁶⁵ Both suggested integrated use of the land, but the Canadian Forest Products proposal would have resulted in a much more extensive allocation of timber land as winter range for wildlife. Both the biologists and conservationists felt that the MacMillan Bloedel proposal would not have adequately protected black-tailed deer and elk, whereas the Canadian Forest Products proposal would have done a much better job in this regard.

Several other land use conflicts involving MacMillan Bloedel have occurred. In 1972, the company proposed to subdivide some of its industrial forest land near the Lower Mainland area of British Columbia for recreational property. Included in these lands was part of Galiano Island, one of the Gulf Islands in the Strait of Georgia. The provincial government objected to this subdivision and sale, because these lands had for years been designated as a "tree farm" with significant property tax concessions. Residents of the islands also protested the move, since they believed the area's population would increase and their life style would

be disrupted if the company was allowed to subdivide these holdings. In the face of public protest and threatened legislation, the company withdrew its proposal.⁶⁶

According to representatives of the British Columbia Fish and Wildlife Branch a confrontation which occurred over Shoemaker Bay, an area near Port Alberni, British Columbia, is typical of the company's performance in many land-use conflicts. The controversy arose over a proposal by MacMillan Bloedel for land-fill and use of an area for log sorting. This plan would have affected shallow waters used as a winter feeding area by trumpeter swans. After substantial public protest, the company agreed to set the site aside as a wildlife reserve.⁶⁷

Regarding land use issues, the company attempts to maximize profits from the resources it has assembled under its control. Indeed it would be derelict in its duty to its shareholders if it did not. Questions of alternative resource uses such as wildlife management or public recreation are subordinate to that main goal. For example, this orientation is apparent in the firm's land use policy which states that "where compatible with the primary use of growing timber" it will preserve other forest values. However, MacMillan Bloedel is sensitive to its public image. In land use conflicts where significant public or government protest has occurred, the company has often acquiesced, and accepted an alternative management regime for the area in question.

Resource Management Performance

Before the 1960's, resource management by forest product firms almost exclusively meant the practice of industrial forestry. But as pointed out in the previous sections, the forest industry has in recent years been called upon to manage lands under its control for multiple forest uses, including fish and wildlife habitat, water quality, and recreation, in addition to timber production. This section discusses MacMillan Bloedel's performance as a resource manager in both these contexts.

From the viewpoint of industrial forestry management, consensus is that MacMillan Bloedel's performance has been laudable. Under the terms of TFL agreements, the firm is responsible for making logging plans, regulating its cut, reforestation and most other management duties. In its submission to the Pearse Commission the company points out that its management of public owned lands has been good, especially in terms of reforestation performance. In fact, the company states that the management of public lands held in TFL's by private firms is generally far superior to the forest management practices of the British Columbia Forest Service on public lands under its supervision.⁶⁸ This opinion was not refuted by Forest Service officials, who stated that MacMillan Bloedel does manage at least as well as the standards required in the TFL agreements.

Where the company has been required to manage its public forest lands for other uses in addition to industrial forestry, MacMillan Bloedel's

performance has at times been subject to criticism. Provincial Fish and Wildlife Branch officials maintain that in years past the company has only accepted multiple use or intense management of certain areas in response to public pressure. In areas where the company is subjected to public scrutiny, it has improved the quality of its management for fish and wildlife. Yet in other less visible but still ecologically significant areas, its management practices meet only minimal standards. These provincial resource managers do expect that MacMillan Bloedel will gradually improve the quality of its management for fish and wildlife in response to changing social values.

In recent years, public perception of forest uses have changed. MacMillan Bloedel has often been confronted with requests to manage a certain area in a relatively expensive manner, or make withdrawals from its industrial forest lands for alternative uses. The company, of course, believes such expenditures or efforts to be "non-productive", i.e., non-revenue producing. MacMillan Bloedel's general argument is that these efforts are often more costly than the social value of resources being protected.⁶⁹ In the face of public pressure and rulings from provincial agencies, the company will likely conform to the changing norms for its management. The company has increasingly accepted its responsibilities to manage in a multiple-use manner; in fact, MacMillan Bloedel has recommended that the government grant legal recognition of these responsibilities and compensate the company for expenditures made for multiple-use management.⁷⁰ But, as stated by one provincial resource manager, it has sometimes appeared that MacMillan Bloedel is more motivated by fear of a bad public image than a desire to manage its tenured lands for other social values as well as timber production.

This conflict is one that in many respects has its roots in the provincial forest tenure system. Public references--which are difficult to measure--have changed, while the forest corporations, which have been given long term responsibilities to manage extensive areas of provincial forest lands, pursue an unchanged goal--profit maximization.

LABOUR RELATIONS POLICIES

In some respects a company's labour relations behaviour is one of the chief determinants of its direct social impact because the individuals it employs are those with which it has the most interaction. MacMillan Bloedel employs over 16,000 people in its British Columbia operations, of which approximately 81 per cent are hourly workers protected by unions.⁷¹ Relationships that the company has maintained with these labour organizations and the workers they represent comprise the focus of this section.

The interaction between a corporation and its organized labour has many facets. One major consideration is the real level of wages and benefits the workers receive, relative to others in the industry or the geographical area. Another consideration is the frequency and duration

of strikes, protests and periods of conflict between labour and management. A third aspect is the nature of programs established by the corporations to train, involve or reduce alienation of its workforce.

It should be established at the outset that in general MacMillan Bloedel does not bargain directly with the labour organizations representing the majority of its workers. MacMillan Bloedel is a member of the Forest Industrial Relations Association (FIRA) and the Pulp and Paper Industrial Relations Bureau (PPIRB), both of which act as bargaining agents for member firms from the Coastal forest industry. The FIRA has approximately 140 clients and negotiates contracts covering sawmills, plywood mills etc., with the International Woodworker Association (IWA). The PPIRB negotiates contracts which cover the primary pulp and paper sectors for its 15 clients. This organization deals with the Canadian Paperworkers Union and the Pulp and Paperworkers of Canada. All agreements between member firms and the unions are negotiated by these two organizations, and settlements are common to all members. In other words, agreements are negotiated virtually on an industry-wide basis, as opposed to company by company negotiations. Thus the level of wages and benefits paid by MacMillan Bloedel does not reflect specific agreements negotiated by that company but are uniform throughout the coastal industry. Similarly, strikes are normally called on an industry basis, rather than against a single firm.

In economic theory, this type of bargaining situation is termed a bilateral monopoly. A monopsonistic employer is confronted by a strong industrial union, so that market power is evident on both the supply and demand sides of the labour market. This kind of labour market has been loosely typified as one of countervailing power, in which unionism may offset corporate power. The wage level and quantity of labour forthcoming in this market will likely be closer to the level determined in a competitive system that would be the case in a purely monopsonistic or monopolistic market.

Since MacMillan Bloedel is the largest forest products company in the province, it can be presumed that the firm yields appreciable influence within the two bargaining associations described above. The firm has numerous representatives on committees within these groups, including the steering committees. Technically, the firm has 15 per cent of the votes in the FIRA (in contrast to its control of roughly 30 per cent of provincial production of building materials) and a voting strength in the PPIRB directly proportional to its share of provincial output of pulp and paper. However, it is impossible to ascertain exactly how much influence the company exerts in the bargaining process.

Approximately 70 per cent of MacMillan Bloedel's hourly workers are covered by these industry-wide agreements. The remaining workers are covered by some forty other contracts which are negotiated with each union on an individual basis. A member of the MacMillan Bloedel industrial relations group indicated that settlements in the industry-wide agreements covering the IWA, CPU and PPWC influence wage and benefit levels in other labour agreements negotiated by MacMillan Bloedel.

WAGE LEVELS

In absolute terms, British Columbia Coastal workers are the highest paid in the North American forest sector. Recent tabulations show that employees in the British Columbia wood products sector earn on average some 26 per cent more than their counterparts throughout Canada, and over 50 per cent more than the United States average in wood products. Earnings by workers in the Coastal industry (including MacMillan Bloedel employees) are slightly higher than the British Columbia average (see Table III.10). Average wage levels in the British Columbia wood products industries are nearly identical to average earnings in the whole manufacturing sector, but lower than in mining or construction, as shown in Table III.11.

While high when compared to national or United States wage rates in the same industries, these rates do not necessarily imply a higher standard of living. In order to calculate purchasing power a sample of price indices for rural industrial towns would have to be constructed. Unfortunately such detailed data are not readily available. Some argue that the difference between American and British Columbia wage rates is explained in part by the provincial stumpage system. (Costs of logging (including labour) are allowed as deductions in calculation of provincial revenues. Thus, when a firm is operating above "minimum stumpage," increased labour costs mean lower royalties. Wage levels in processing sectors tend to follow those in logging.

CONFLICTS AND ISSUES

Unlike the contract negotiation process, MacMillan Bloedel does interact directly with the involved union when local conflicts arise such as grievances, arbitrations or wildcat strikes. The company has been subject to two extended labour relations conflicts which were relatively unique in the British Columbia forest sector. One conflict involved a protracted strike at MacMillan Bloedel's Red Band shingle mill in New Westminster, while the second was a long series of wildcat strikes against various MacMillan Bloedel divisions, primarily on Vancouver Island.

In 1972, the IWA attempted to set a precedent for shingle mills throughout the province by calling for a shorter work week both at MacMillan Bloedel's Red Band Mill, and a mill operated by Canadian Forest Products Ltd. MacMillan Bloedel and Canadian Forest Products resisted this change in the agreements and a strike ensued at both these mills. A labour relations official at MacMillan Bloedel indicated that the firm took its stance on behalf of the whole industry since a reduced work week in the MacMillan Bloedel mill would have set an extremely costly precedent. The strike at the Red Band mill continued until 1976 even though the company permanently closed this mill in 1973. A settlement was reached in March, 1976, when the company agreed to severance pay, a pension package for older employees and preferential rehiring of Red Band employees at other MacMillan Bloedel divisions. The shorter work week was not included in the agreement.⁷² The strike at the Canadian Forest Products mill remained unsettled.

Thus MacMillan Bloedel managed to withstand the IWA's attempts at shortening the work week in British Columbia's shingle mills, in spite of a strike which was one of the longest in IWA history. According to some labour sources, it was a strike which was bound to be lost, since the costs to the firm of a shorter work week would be extremely high in terms of an industry-wide precedent.

The second example of friction in MacMillan Bloedel's labour relations involved a series of wildcat strikes which occurred between 1968 and 1973. These strikes took place in isolated areas, primarily in logging divisions on Vancouver Island. Causes of these wildcat strikes were varied, but often occurred over job classifications or other specific issues arising between workers and local management.

MacMillan Bloedel labour relations officials stated that wildcat strikes occurred throughout the whole forest industry during that time period, but MacMillan Bloedel experienced them more often than any other firm. The frequency of these strikes decreased drastically during 1974, and there have been only sporadic disturbances since then. According to MacMillan Bloedel officials, a climate of better cooperation was established during 1974 between labour and management which has helped to reduce the frequency of wildcat strikes.

An interview was conducted with union officials from one local representing approximately 3,400 MacMillan Bloedel employees in order to determine their perceptions of these wildcat strikes. Other topics discussed included the overall relations between MacMillan Bloedel and its organized labour. These labour representatives described the period of wildcat strikes as a time of increased labour management "friction" and "lack of confidence in the MacMillan Bloedel administration." When asked for explicit examples they referred to one logging camp notorious for its disruptions which suffered from a "breakdown in communications between labour and local management." This manager was replaced, the new manager opened informal avenues of communications with the employees, and disruptions ceased.

The period of wildcat strikes continued for a number of years because the tactic was effective, according to the union leaders. After the firm refused to capitulate on three successive issues in which it had defensible positions, the wildcat strikes effectively halted. Moreover, the top level of MacMillan Bloedel management in power during 1974 and 1975 was well respected by union leaders. Apparently a sense of cooperation was established during that period which reduced friction.

These union officials remarked that in mid-1976 they perceived a distinct change in the MacMillan Bloedel attitude toward its organized labour. They portrayed the high levels of management as comprised of both "hawks" and "doves". "Hawks" present an aggressive, hard-line, cost-minimizing stance toward labour, while "doves" try to maintain a more cooperative, conciliatory relationship with workers. During times of economic adversity, the "hawks" will surface in the organization and fashion a

corporate policy that is relatively rigid and unyielding toward the unions. According to these union leaders never had the MacMillan Bloedel management been more "hawkish" than in 1976. This situation likely arose because of the firm's financial difficulties of that period. If this spirit of confrontation continues or worsens it will likely spawn a period of labour conflict for MacMillan Bloedel, as was the case from 1968 to 1973.

In spite of this sense of confrontation, these union leaders maintained that across the board, MacMillan Bloedel has "not been a bad corporate citizen" in its labour relations. In general the company attempts to cooperate with the unions.

These union officials indicated that if they could change one aspect of MacMillan Bloedel's labour relations, it would be the process of decision making on local issues. They believe that there has been a recent tendency for the company position in local conflicts to be set by the central office, rather than by local managers. Often these kinds of decisions are made without a thorough awareness of the situation, and with no responsiveness to the workers affected. Centralized decision making lessens the ability of the local manager to deal effectively with his workforce, according to the union spokesmen. Furthermore, the grievance procedure established to resolve local conflicts breaks down when local officials are denied the power to make decisions.

Representatives of the firm strongly disagree with this view. They contend that since 1972 local managers have been granted increased autonomy in labour relations, constrained, of course, by the FIRA or PPIRB master agreements.

COMPANY LABOUR RELATIONS PROGRAMS

According to many sources, MacMillan Bloedel has instituted a wide range of programs for the benefit of its work force. Several of these are referred to in the company's submission to the Royal Commission on Corporate Concentration. The firm maintains a job training program, and employees are encouraged to participate in courses which "enable them to develop more fully their potential skills and talents." Similarly, MacMillan Bloedel has instituted programs which attempt to increase job satisfaction and reduce the sense of alienation common in production work.

As organizations increase in size, either in the private sector or government, the communication and authority structure become (sic) more complex. With this increased complexity, there is a greater likelihood that employees will feel less important and less able to affect the organization. This alienation leads to employee dissatisfaction and robs the organization of many of the creative contributions which those individuals could provide. It is in the best interests of the employees and the organization to reduce this alienation as much as possible.

One major management concept assists MacMillan Bloedel in its attempts to involve its employees in decision making. Participative management, where subordinates participate in

Table III.10

AVERAGE HOURLY EARNINGS IN WOOD PRODUCTS SECTORS⁽¹⁾

	B.C. Coastal (including MB) ⁽²⁾	B.C. Aggregate	Canada	U.S.
1957	\$2.17	\$1.85	\$1.56	\$1.74
1967 ⁽³⁾	\$3.22	\$2.96	\$2.27	\$2.37
1975	\$6.63	\$6.54	\$5.17	\$4.28
1967-1975				
% increase	106%	121%	128\$	81%
\$ increase	\$3.41	\$3.58	\$2.90	\$1.91

(1) Canadian figures in Canadian dollars, U.S. figures in U.S. dollars. Excludes forestry workers.

(2) Data for the Coastal industry refers only to pulp workers, which are a subset of those considered for B.C. in aggregate. Thus, the two columns are not strictly comparable.

(3) 1975 data is preliminary and does not include the British Columbia settlement of that year.

Source: Statistics Canada and U.S. Department of Labour Bureau of Statistics, as cited by the British Columbia Employers' Council, Vancouver Sun, July 3, 1976, p. 28. Also, MacMillan Bloedel Ltd.

Table III.11

AVERAGE HOURLY EARNINGS IN SELECTED B.C. INDUSTRIES

	Wood Products ⁽¹⁾	Manufacturing	Mining ⁽²⁾	Construction
1957	\$1.85	\$1.91	\$2.00	\$2.38
1967	\$2.96	\$3.01	\$3.40	\$4.30
1975	\$6.54	\$6.55	\$7.39	\$9.89
1967-1975				
% increase	121%	118%	117%	130%
\$ increase	\$3.58	\$3.54	\$3.99	\$5.59

(1) Excludes forestry.

(2) Includes milling.

Source: Statistics Canada and U.S. Department of Labour Bureau of Statistics as cited by the B.C. Employer's Council, Vancouver Sun, July 3, 1976, p. 28. Also, MacMillan Bloedel Ltd.

decision making with their superiors, is encouraged and is increasing at all levels. Besides implementation at managerial levels, it is being tried on an experimental basis at three smaller plants with production employees rotating jobs and participating in making decisions about their jobs.⁷³

The results of one experimental job rotation system were summarized by the program's coordinator:

When (an employee gets bored with his work) all kinds of problems can crop up: relations between employees may deteriorate, safety standards can slip, friction can develop between management and labour and productivity could suffer.

We developed these programs to head off these problems and to provide our employees with an opportunity to earn extra pay through self improvement.

*So far it looks like we're succeeding quite well. Productivity is considerably higher than forecast, our accident rate is zero, and I doubt that we'll ever have a plant dispute that we can't work out among ourselves.*⁷⁴

One notable void is evident in MacMillan Bloedel's personnel policies. This firm has established no specific "affirmative action" programs to increase its employment of labour force minorities, such as women or Indians. It was stated by a MacMillan Bloedel labour relations official that the firm informally makes an effort "to involve minorities in its workforce." Indians are often employed by MacMillan Bloedel, and "a number of women were progressing in management" as well as production work according to this source. However, data indicate that only about 2 per cent of MacMillan Bloedel's employees at the management level or above are women.⁷⁵ No data were available regarding employment of Indians.

POLITICAL INFLUENCE

Clearly, the identification and evaluation of political influence exercised by a particular corporation is an extremely difficult undertaking. Corporations, like all institutions and individuals, are affected by government policies and therefore have the incentive to keep themselves informed of the implications of those policies and, when possible, to influence the direction those policies take. Such influence can take two forms.

On one hand, political interaction can be aboveboard, constructive, and, not unimportantly, legal. Examples of acceptable corporate political behaviour are: declared financial contributions to political parties, lobbying, public statements, and informational submissions to policy making bodies. However, the exertion of corporate influence can take less innocuous forms, the extent of which has become altogether too clear in the

political scandals characterizing the early 1970's. Such behaviour, which ranges from the mildly unethical to the outright illegal, is hard to identify and even harder to prove.

Some officers of MacMillan Bloedel contend that the firm has no political influence within the province. In fact they maintain that the firm's influence is negative-- that its economic and social performance must be better than its competitors in order to obtain equivalent treatment from governmental agencies. Conversely, members of the radical left in British Columbia have alleged that the provincial government is but the tool of forestry and mining interests. Neither of these extremes are plausible.

More credible is the notion that the firm is extremely sensitive to issues in forest resource policy, and that it tries to maintain a high level of cognizance of potential policy changes. Moreover, it attempts to strongly persuade policy makers and the public of the correctness of its position on policy matters which affect it. For the most part the firm's efforts in these dimensions can be documented. Of course, political manipulation is by definition hidden from view, and as such is beyond the scope of this study. We have neither looked carefully for, nor have we found, evidence which would imply that the firm engaged in unethical political persuasion in recent history.⁷⁶ The one questionable case reported herein is a matter of public record which has enjoyed considerable publicity. We have attempted to document the firm's effort to disseminate its views on policy matters.

As spokesmen of the largest resource based firm in the province, the officers of MacMillan Bloedel frequently speak out on issues affecting the provincial economy, especially the forest products industries. Such statements are one aspect of acceptable corporate political interaction. Examples abound.

In the fall of 1974, two Vancouver newspapers conducted interviews with Denis Timmis, then President of MacMillan Bloedel. These interviews attempted to determine the company's reaction to the provincial business climate, particularly in the forest industry.⁷⁷ At that time the New Democratic Party was in power in the province and was committed to reviewing the terms of taxation and alienation of provincial resources, including forestry.

In these interviews, a major point made by Timmis was that he believed his company could cooperate with the N.D.P. and would like to defuse confrontations between industry and government. However, the climate of uncertainty caused by investigation and review of the industry was damaging, in Timmis' opinion.

I'd like to get away from the confrontation which has tended to prevail and which has been gravely complicated by the uncertainty that has prevailed. That's the biggest problem

in this province. We still don't know what's going to happen on royalties nor on the stumpage formula for the coast. They have the Pearse report on both these things.

(A task force headed by Pearse recommended increased royalties on old forms of timber tenures and made recommendations on stumpage charges for the coast).

This industry cannot function efficiently on an international basis in an atmosphere of doubt and uncertainty here. We cannot plan that way and they must understand that. I have found a total lack of recognition of this factor.⁷⁸

During the 1972 federal election an interesting exchange took place between J.V. Clyne, Chairman of MacMillan Bloedel and David Lewis, leader of the New Democratic Party, while Lewis was waging a campaign against "corporate welfare bums". Clyne touched off the exchange by calling on his fellow businessmen to dispute these claims; he stated that Lewis was attempting to undermine public confidence in government policy through insinuation of underhanded corporate tax loopholes.⁷⁹ Lewis responded by adding MacMillan Bloedel to his "honor roll of corporate welfare bums," after pointing out the amount of profits and taxes paid by the company.⁸⁰

C. Knudsen, the newly appointed president, maintains the tradition.

The newly-appointed American-born MacMillan-Bloedel president urged business men to educate the public of the vital contribution competitive enterprise makes to the economic and social well-being of the country.

... "if we want less government, and I submit we need less government, then we need more satisfied customers,"⁸¹

MacMillan Bloedel is, understandably, extremely sensitive to public policy which directly affects its economic well-being. It makes known its stance on policy issues either directly or through the offices of the organizations to which it belongs. Earlier in this study, the firm's membership in business organizations was discussed (see Table II.42, page 164.) A number of these organizations make representations to government on behalf of their constituents. For example the British Columbia Chamber of Commerce, the Canadian Chamber of Commerce, and the Canadian Manufacturers' Association make statements in support of the business community at either the provincial or federal level. The Canadian Export Association takes up the cause of exporters, which MacMillan Bloedel certainly is. The majority of the organizations are much more specific with respect to their areas of interest. The titles of such associations as the Fibre Box Association and the Canadian Pulp and Paper Association clearly indicate their primary areas of concern.

One of the most important of these organizations is the Council of Forest Industries, which represents the British Columbia forest products industries. The Council states that its active and affiliated members produce 90 per cent of the total value of the production of the British Columbia forest industry.⁸² The Council's revenues are directly related to its members' production and its budget in 1969 amounted to 2.8 million dollars. Of this, 57.1 per cent was allocated to trade promotion, the remaining going to research, accident control, quality control, public relations and administration.⁸³ The Council is extremely active in making representations to, and monitoring the activities of, the provincial government. Until recently it was the only organization in the province to have a full time lobbyist in the provincial capital.

In its annual Report of 1975 the Council lists amongst its activities: the preparation of a brief to the provincial Royal Commission on Forest Resources; the submission of a Pollution Inquiry Brief; production of daily reports of the proceedings of the Royal Commission on Forest Resources; and representations to the provincial and federal governments to seek a relaxation of tensions with the United States evidently caused by "anti-American" sentiment in Canada.⁸⁴

When the stakes are high the firm makes its own representations, often in addition to those made by trade organizations. Seemingly, the higher the stakes the stronger the representation. The Royal Commission on Forest Resources, which investigated the implications of the provincial tenure system, was the recipient of three briefs, containing nearly 400 pages, proffered by MacMillan Bloedel. In contrast, this Royal Commission received from MacMillan Bloedel a brief of 54 pages. To the firm, forest tenure is a bread-and-butter issue while potential constraints on corporate concentration represent only a vague threat. The comparison may seem frivolous but we believe it to be representative.

Of considerable interest are the firm's donations to political parties and individual campaigns. Unfortunately Canadian law does not require disclosure of corporate political donations, and thus the information is not in the public domain. Our requests for information relating to the magnitude and direction of political financial support have been refused.

The information was given directly to the Royal Commission on Corporate Concentration and we have been informed that it contained "nothing out of the ordinary." It is suggested that Canada might well benefit from the American experience by imposing stronger disclosure laws.

In fact, because it operates in the United States, the firm is subject to the public disclosure programme of the United States' Securities and Exchange Commission. In compliance with this programme the firm is, as of this writing, preparing a statement on questionable trade practices. An internal investigation has yielded no evidence of improper or questionable expenditures associated with transactions in Canada, the United States, England, or Japan, the firm's principal markets. Evidence of any improper or questionable expenditures or practices elsewhere will be disclosed shortly, but are not available at this time.

Another possible source of political influence is based upon the frequency with which executive personnel move between positions of authority in industry and positions of authority in government. Rightly or wrongly a suspicion arises that individuals cannot abruptly make the transition from regulatee to regulator. In some countries, France being a good example, the facility with which executives move between positions in government and industry is viewed with mistrust by critics of the political/economic order.⁸⁵ A counter position, perhaps relevant in British Columbia, is that the pool of high calibre executive talent is so small that industry and government will of necessity call upon the same individuals.

MacMillan Bloedel has both supplied government with executive talent and recruited executive talent from government. Three of six men who have served as Chairman of the Board of MacMillan Bloedel formerly held influential positions in the British Columbia government or judiciary. H.R. MacMillan, founder and driving force behind the company, was Chief Forester of the province from 1912 to 1915, and one of the architects of the British Columbia Timber Royalty Act. MacMillan has served the federal government in administrative positions related to timber and shipping during both World Wars.

An associate of MacMillan's, J.V. Clyne, served as Justice of the Supreme Court of British Columbia from 1950 to 1957; Clyne resigned that position to become MacMillan Bloedel Chairman from 1958 to 1973. Clyne has represented Canada on United Nations and NATO committees dealing with shipping and served as Chairman of the British Columbia Royal Commission on Land Expropriation in 1961. Robert W. Bonner served as Attorney General of the province from 1952 to 1968, as well as holding diverse portfolios for the government, including Industrial Development, Trade and Commerce, and Commercial Transportation. In 1968, Bonner retired from the office of Attorney General to join MacMillan Bloedel as a senior Vice-President. In 1973, Bonner became Chairman of the Board, a position he held until 1974.

Some of the firm's officers also had strong ties to the provincial and federal governments. Clarence Wallace served as Lieutenant Governor of British Columbia from 1950 to 1955, before becoming a MacMillan Bloedel director. F.H. Brown previously served as Deputy Minister of the federal Department of Taxation and National Revenue. From 1946 to 1952, H.G. Letson was secretary to the Governor General of Canada.

In the early months of 1977 one case of executive interchange caused the firm some embarrassment. Local newspapers ran front page stories having 'discovered' that a vice-president of MacMillan Bloedel was on loan to the government's insurance corporation. Because there was neither evidence of, nor an obvious potential for, conflict of interest the newsworthiness of the story is questionable. What is of interest is the reason given by the government for the appointment.

McGeer (the minister responsible for the appointment) said the corporation has "an acute shortage" of top executives and Gillen (the MacMillan Bloedel executive) is filling in until it can be alleviated.⁸⁶

From this we cannot conclude that MacMillan Bloedel enjoyed any special access to public policy makers. We present the information simply to indicate that the potential existed.

There is, however, one incident in which the issue of preferential treatment arose. In 1968, MacMillan Bloedel officials approached the Minister of Lands and Forests regarding the term of its Old Temporary Tenure Licence holdings. Up to that point, all holders of such licences were required to apply annually for renewal to keep the tenures valid, even though the lands were often incorporated into TFL's, which have separate renewal procedures. MacMillan Bloedel requested and received from the Minister a blanket long term renewal for all its Old Temporary Tenures, which extends until the lands are cut in accordance with proposed logging plans. This blanket renewal gave MacMillan Bloedel secure tenure over its Old Temporary Tenures for varying periods, in some cases as long as 40 years. These 40-year renewals are the longest term of tenure in existence throughout the whole of British Columbia's forest industry. In this manner the company avoids the procedure of applying annually for renewals. MacMillan Bloedel controls approximately 40 per cent of the Old Temporary Tenures which are still valid, and has been the only firm to receive such a blanket renewal of its Old Temporary Tenure holdings.⁸⁷

This anomaly in the administration of Crown lands was pointed out during the proceedings of the Pearse Royal Commission. During its hearings, the question arose with respect to the Minister's authorized power to grant such renewals. In its summary submission to the Pearse Commission, MacMillan Bloedel argued that this renewal was within the powers of "ministerial discretion as to terms and conditions ... not only was the extension of these licences perfectly legal, but we do not see how the propriety of the extension can be attacked." MacMillan Bloedel maintained that other forest industry firms were aware of the arrangement, but they were "evidently less concerned than MacMillan Bloedel since apparently they did not proceed with representations to the Minister."⁸⁸

In his final report, Commissioner Pearse used strong words to describe the situation.

...it is necessary to say that the government's action (in this case) was highly irregular and in my opinion improper.... By proffering special treatment the government inevitably exposes itself to charges of favouritism and undermines public confidence in resource administration. Moreover, by reissuing certain licenses for periods up to 45 years, the Crown's valuable option to periodically renegotiate their terms and conditions was forfeited.... Discretionary actions that lead to inequities and legal uncertainties of these proportions have no place in the forest policy of British Columbia.

*The special terms of Timber and Pulp Licenses reissued to one company in 1968...were generous. By receiving terms designed to accommodate a harvesting schedule proposed by the company, this license obtained a degree of security which is unmatched by any other holder of these tenures.*⁸⁹

One particularly vexing problem is the relationship of the firm's investment decisions to the prevailing political climate in the province. While the NDP was in power, charges were made that MacMillan Bloedel and other major corporations were withholding investment in the province in order to weaken the economy and thereby discredit the party. G. Currie, then Chairman of the Board, responded forcefully.

I can recall having said...that the NDP were well-intentioned but simply had not been able to think through their policies with respect to the forest industry. The last half of that comment still holds, but their actions and statements in the interval have created uncertainty as to their intentions towards our industry and business generally.

One remarkable indication of Victoria's attitude has been the recent criticism of the Company's foreign investment programme. You may have seen assertions made, at Cabinet level, to the effect that we are draining money out of British Columbia and investing it in foreign countries rather than keeping it at home. I do not need to discuss with this audience (the shareholders) the curious notion that outside investments are lost money, gifts to ungrateful foreigners. It is apparent to anyone who has studied our Annual Reports that MacMillan Bloedel's investment and diversification programme over the past ten years has contributed greatly to the strength of this Company, and in the process, has helped make more secure the jobs and incomes of thousands of British Columbians....

*I would observe, however, that if there is concern for the current level of business investment in British Columbia it is wholly within the power of this government to so restore business confidence that capital again will seek its opportunities here.*⁹⁰

The NDP were deposed in late 1975 and replaced by Social Credit, a party held to be more favourable to business. In early 1977, C. Knudsen announced a \$450 million investment programme in British Columbia.

*This investment programme in B.C. should lay to rest any concern that MacMillan Bloedel might diminish its British Columbia identity or neglect its British Columbia resource.... the investment reflects renewed confidence in the business climate of the province.*⁹¹

The charge of 'capital strike' becomes almost tautological. If the government is inimical to business then business quite rationally assigns a value to the increased risk and investment consequently falls. If the decline in investment is widespread the economy will falter and the party in power will suffer. All of this can result from rational business behaviour, free of malice or conspiracy. Unfortunately for the NDP, 'back to work' legislation applies to labour but not capital.

CULTURAL INFLUENCE

INTRODUCTION

Any attempt to appraise the impact of an institution, such as a large industrial corporation, upon a nation's, province's or region's "culture," requires first a definition of "culture" and second some criteria by which "impact" can qualitatively if not quantitatively be measured. The Gray Report provides us with a definition:

Culture is not simply the arts, architecture, films, books, sculpture and paintings of a nation. Culture is the historically developed values and patterns of behaviour covering the whole range of human activity. Quite simply, the culture of a people is its entire way of life. Culture is reflected in the role of private property, the political and legal system, patterns of family life, sports, aspirations for growth and higher standards of living, the social distribution of wealth, the role of the market-place, the role of government, business and other interest groups and the relationship between them, the relations between labour and management, to mention but a few of the facets of culture....

When understood in this broad sense, there can be little doubt that economic activity, as organized in the modern corporation, has a profound impact on culture, especially on the nature of the social, political and economic system, and the technology employed.

Given the complex inter-relationships within a culture, it is difficult to isolate and analyse the corporate impact, whether domestic or foreign, on culture.⁹²

To document a firm's impact on the development of Canadian "values and patterns of behaviour" is a horrendous, if not impossible, task. However, by making the assumption that there are groups which exercise significant influence over the evolution of societal values (i.e. that "values are much more likely to flow in a 'downward' than 'upward' direction"⁹³), and by recognizing that these groups are lodged in different institutions of society including educational institutions, government and business, we are able to make some statement of MacMillan Bloedel's role as an influence on social values. Succinctly, we subscribe to the

theory that 'élites' do exist in Canada, that they do influence social values, that they do derive a proportion of their influence from their positions in large corporations, and based upon the evidence provided below, that MacMillan Bloedel does have members of this élite in its executive ranks.

While culture "is not simply the arts, architecture, films, books, sculpture and paintings," the fine arts, educational systems and the communications media are both manifestations and molders of a nation's culture. To varying degrees each of these sets of cultural institutions are dependent upon the business community for both financial support and contributions of organizational talent. Such donations of time and money can be documented and give an indication of the direction and extent of a firm's support, and thus influence, over these cultural institutions.

THE MACMILLAN BLOEDEL EXECUTIVE AS A COMPONENT OF THE CANADIAN ELITE

Two important works in the study of Canadian corporations are those of Porter and Clement.⁹⁴ These studies point to the existence and coherence of a dominant "élite" in the Canadian institutions of business, education, labour, government and the media. The élite is defined as "that set of uppermost positions within any given institutional sphere that is arranged in a definite hierarchy."⁹⁵ Clement, particularly, focused his studies on the senior management and directors who constitute the Canadian corporate élite. Because of its size MacMillan Bloedel, Ltd. was included in his general analysis of 113 dominant Canadian corporations.

Much of an élite's power is based on its cultural experience. Thus, inquiry into the cultural impact of a corporation must first establish whether, under close examination, its senior management and directors function as an élite as defined by Porter and Clement. To answer this question each of Clement's characteristics of the national corporate élite was applied to the particular activities and background of the directors and officers (referred to collectively as the executive) of MacMillan Bloedel, Ltd. Once satisfied that a coherence of activity exists among these people, the influence of this élite upon the cultural institutions of British Columbia was analyzed.

The analysis proceeded in the following manner. First, names of all individuals serving as members of the MacMillan Bloedel executive (both directors and officers) since 1960 were assembled from the firm's annual reports; the list totalled 101 men.⁹⁶ Next, various sources were consulted to assemble professional and biographical data for these people.⁹⁷ Substantive information was available for 45 men, or slightly less than half the directors and officers holding office since 1960. (See Table III.12., page 236.

Only MacMillan Bloedel executives resident in Canada were included in the analysis. After an examination of their biographical data, directors and officers resident in the United States were excluded for three reasons. First, the Commission has specified that is is not concerned at this time with the effects of foreign control. Second, the cultural activities of

these men did not observably affect British Columbians, and third, the pattern of their activities and charitable donations offered no contradictions to that of their Canadian counterparts.

The cutoff date of 1960 was chosen because cultural impact is a cumulative process, the effects of which are most accurately measured over time. Also, 1960 was the year of MacMillan and Bloedel's merger with the Powell River Company, and marked a period of rapid expansion of the company, bringing increased potential for its cultural influence. It is clearly indicated in the text wherever information was not available for this entire time period.

This sample is subject to several biases which should be made explicit. Firstly, only the most active people are included, that is, those most likely to conform to a definition of an élite. Secondly, because the search for biographical and professional data was limited to the 1960-1975 period, there is an understatement of the activities of men in the executive who had been more active in earlier times. Finally, no consideration was given to the length of service to the firm. For some there was a lifetime connection, for others the relationship existed for less than a year.

Porter and Clement have written extensively on the existence and coherence of a Canadian corporate élite. These researchers examined the backgrounds of directors and senior officers of major Canadian institutions. Attention was focused on biographical and professional characteristics of individuals, including: regionalism and class origin, family connections, ethnic origin, sex, religious affiliation, education, private club membership, multiple directorship holdings, philanthropic or trade associations, political relationships and access to "élite forums". On the basis of strong similarities in these characteristics, Clement concluded that:

...at the top a small number of people with common social origins common experiences, and common interests oversee the direction of economic life...their tight control of the legal fictions known as corporations, denies most members of Canadian society any influence or participation in the fundamental economic decisions that affect the future and direction of the Canadian nation-state. ... (there is) a "corporate mirage" of competing, struggling corporations which obscures the reality of élite power and masks over-riding factors which bring those at the top together to govern these legal fictions.⁹⁸

In this section, the backgrounds of the MacMillan Bloedel executive are analyzed to determine whether this group fits the patterns of the national élite.

Regionalism and Class Origins

By the 1920's to 1940's there was an established "upper class" in eastern Canada. However, the west, populated by an immigrant society, was slower to develop a crystallized, closed social and economic structure.⁹⁹

*There's hardly anybody still important in Vancouver whose own experience, or at least that of his father or grandfather, didn't encompass the actual hard work of his trade. Men who started out in the bush by buying a saw and went on from there. This is very different from the roots that nourish the great power centres of Eastern Canada. ...*¹⁰⁰

At MacMillan Bloedel, the number of executives who are presidents of companies bearing their own names, such as John Lecky of Smith, Davidson and Lecky, Limited; H.T. Mitchell of Mitchell Press, Limited; H.F.G. Letson of Letson and Burpee Limited, (manufacturers of sawmill machinery); H.R. MacMillan; as well as others who are known to have "started from the bottom," such as J.V. Clyne; N.R. Crump (President of Canadian Pacific Limited, whose father was a railroad superintendent); and W.J. VanDusen attest to the fluid social structures in the West in the 1920's.

Family Connections

Clement found that "inter-generational transfer of property or position" represents a common form of access to the élite.¹⁰¹ While the executive of MacMillan Bloedel comprises, as noted above, a large number of "self-made men," there are several instances of such inter-generational transfers. Gordon Farrell, Clarence Wallace, the Foleys and Prentice Bloedel all represent "old money" insofar as the expression is applicable to British Columbia.

Marriage patterns are not specifically dealt with by Clement in the national picture. Nevertheless daughters seem to have played a particularly important part in cementing directorship links within the MacMillan Bloedel corporate structure. (See Table III.13)

Ethnic Origin

On a national basis some 92.3 per cent of the corporate élite are of English origin.¹⁰² Based on the evidence of surname, MacMillan Bloedel directors and officers show the same preponderance of Anglo-Saxon surnames. (See Table III.12) There are no apparent Jewish or French-Canadian names in this list.

Sex

There has never been a woman among the executives of MacMillan Bloedel. This situation is of course not peculiar to the company. Of the 946 members of the (1972) corporate élite analyzed by Clement, only 6 (or 6%) were women and each held but one directorship.¹⁰³

Religious Affiliation

All those who listed religious affiliation among the MacMillan Bloedel executives were Protestant with the exception of the two Foley brothers, who listed Roman Catholic affiliation. This is consistent with the national pattern.

Education

Nearly 40 per cent of the national élite attended private schools,¹⁰⁴ a common means for the exclusive socialization of the potential élite. According to available information the figure is significantly lower for the executive of MacMillan Bloedel. This is understandable when it is remembered that a large number of the executive were not born to wealth and when recognizing that private schools are fewer and more recently established on the West Coast than in eastern Canada. Of the present directors only one attended St. George's School for Boys, founded in 1931 and now one of the province's most exclusive schools.

The attendance of sons to their father's school is another important part of the continuity of the national élite. Several sons of MacMillan Bloedel executives have been enrolled in St. George's as are a number of grandsons.

At the university level, 84.5 per cent of the national élite have post-secondary education according to Clement. Of the 36 MacMillan Bloedel executives for whom such information was available, 30 (83%) had at least one university degree and three more had some post-secondary education.

Clement's data also show that "post-graduate training and professional degrees are also rapidly becoming prerequisites of élite membership."¹⁰⁵ MacMillan Bloedel reflects this pattern with nine men holding two post-graduate degrees and five holding three degrees (Ph.D's or LL.B.'s).

Unique to MacMillan Bloedel is its extensive connection with a single university-- the University of British Columbia. Of the thirty university graduates, fourteen graduated from the University of British Columbia with at least one degree and five held two degrees. The continuity of this close relationship has been maintained by extensive participation of the MacMillan Bloedel executive in the activities of the university. The next most common alma mater is Yale with five graduates, followed by Toronto with three.

Private Clubs

Often paid for by the company, clubs are social circles where businessmen from the various élite groups meet, exchange information and make decisions. In accordance with the national pattern,¹⁰⁶ club memberships are an important part of MacMillan Bloedel social connections, extending to the international level. Of the thirty-four men who mentioned club memberships, twenty-two belong or have belonged to the Vancouver Club, and five to the University Club (Vancouver) -- two of Vancouver's most prominent. Seven belong to the Capilano Golf and Country Club and eleven to the Shaughnessy Golf Club. Private club memberships are also held in other cities including Victoria, Toronto, Ottawa, Chicago, Minneapolis, New York and San Francisco.

Multiple Directorship Holdings

Interlocks with other major corporations give continuity to executive decision making and increase opportunities for social contact, as well as

offering forums where opinions and information can be exchanged. Like the national pattern, multiple directorship holdings by MacMillan Bloedel executives are extensive, particularly with financial institutions, transport and resource industries. (See Table III.14 for selected list of directorship holdings.)

Of our sample, nine men held no directorships (excluding directorships in MacMillan Bloedel subsidiaries), six held a single directorship, and the remaining thirty held two or more directorships. Of these thirty, fifteen held five or more, and ten held ten or more directorships. Seven of the men holding five or more directorships were sitting on the MacMillan Bloedel board in 1975.

Interlocks with banks and financial institutions are particularly important, since they serve as vehicles of inter-industry coordination. This aspect was dealt with in detail in Chapter II.

Philanthropic and Trade Associations

The directors and officers of MacMillan Bloedel strongly fit the pattern of the national corporate élite in this regard. Extensive participation occurs on the governing bodies of schools, universities, hospitals, foundations and trade associations. These are discussed more thoroughly later, but as examples, this participation includes representation at the University of British Columbia by two Chancellors, three members of the Board of Governors, seven Senators, and five presidents of the Alumni Association. Various MacMillan Bloedel executive members have served as Governor of St. George's School for Boys, Governor for the York House Private School for Girls, Chairman of the Board of St. Paul's Hospital, Director for the St. John Ambulance Association and the Western Society for Rehabilitation, Officers of the Vancouver General Hospital, member of the Board of Management of the Health Sciences Centre at the University of British Columbia, Director of the G.F. Strong Rehabilitation Centre, and on the Advisory Committee to the National Council of Hospital Auxiliaries of Canada.

Members of the corporation's executive have received high civic honours. Four of the company's founding powers have been recognized as Freemen of the City of Vancouver: H.R. MacMillan, Prentice Bloedel, W.J. VanDusen and Col. The Honourable C. Wallace. In addition, J.V. Clyne, Chairman of the Board of MacMillan Bloedel until 1972, was made a Companion of the Order of Canada in the same year.

The company's executive also has extensive connections with a wide variety of trade organizations including local Boards of Trade and Chambers of Commerce, the Council of Forest Industries, the Canadian Pulp and Paper Association, the Canadian Forestry Association and the Fisheries Council of Canada.

Not only are MacMillan Bloedel executive members represented on British Columbia's two foundations, but three of the company's directors were among the ten founders of the important Vancouver Foundation.

Political Relationships

The national picture of increasing interconnections between the political and corporate worlds is evident in the careers of several MacMillan Bloedel executives, notably R.W. Bonner, F.H. Brown, J.V. Clyne, H.R. MacMillan, Harry Letson, Ralph Shaw, C. Wallace and A.H. Williamson. This aspect was discussed in detail earlier in this chapter.

Elite Forums

These organizations are perhaps the most exclusive avenues of contact and communication between members of various élite groups. MacMillan Bloedel has been well represented on these private forums, most noticeably by past Chairman, J.V. Clyne. He has been a member of the Canadian-American Committee, an association of Canadian and U.S. corporate and labour leaders, as well as on the board of directors of the Institute for Public Policy Research, established in 1972 as a body of seven top level representatives of academia, business, politics, the media and the church to "carry out research...to improve the basis for informed choice...by the public of Canada."¹⁰⁷ Another important forum is the Conference Board of Canada (a branch of the U.S. Conference Board) of which another director, Ian Sinclair, is a member. MacMillan Bloedel has also been represented on the Canadian Association for Latin America to which the company has made charitable donations.

In summary, the evidence presented in this section clearly shows that our sample of directors and officers of MacMillan Bloedel fit the pattern of the national corporate élite as defined by Porter and Clement. While they constitute a small fraction of the national élite they form a large part of the provincial élite or what Newman calls the 'Establishment.'

*Because of British Columbia's relative newness, fewer power centres are formed around established wealth. Individual clout tends to be transitory, related directly to corporate, municipal, provincial, and philanthropic hierarchies. An Establishment certainly exists.*¹⁰⁸

Newman argues that this group, perhaps out of insecurity, is isolated from the power circles of the East. If true it serves to increase their relative importance within the confines of the province.

MACMILLAN BLOEDEL'S TIES TO CULTURAL INSTITUTIONS

This section documents the interaction between MacMillan Bloedel (including its executive) and the cultural institutions of British Columbia. Used in this context, "culture" includes the ways in which we organize our leisure time, as well as the ways in which we generate and disseminate information. Using this broad definition the cultural institutions which

are discussed in this section are ordered as follows: recreation and entertainment, the fine arts, education, foundations, public service and the media. Sources of data include both the firm and the individual cultural institutions.

Recreation and Entertainment

MacMillan Bloedel's philanthropic activities are most conspicuous in the area of recreation and entertainment. Institutions endowed or maintained by MacMillan Bloedel, Ltd., or its directors and officers include five major city landmarks: the H.R. MacMillan Planetarium, the Bloedel Conservatory and Plaza, the VanDusen Botanical Display Gardens, the J.V. Clyne Bird Sanctuary and the Vancouver Public Aquarium. The Aquarium is noteworthy for the contributions of money and administrative time it has received. Each of the other facilities discussed is labelled with the name of its benefactor (each a significant personage in the history of MacMillan Bloedel) and was inaugurated by a major private donation but is sustained by corporate, municipal or foundation donations.

The H.R. MacMillan Planetarium was initiated by a personal gift of \$1.5 million from H.R. MacMillan, which was, like many of his gifts, specified as a "one shot" donation. Neither MacMillan nor the company has made any major further donations. The facility is part of a museums complex which since 1973 has been a private association supporting itself on gate receipts and annual municipal grants.

The Bloedel Conservatory, opened in 1969, was financed by the Bloedel Foundation. The VanDusen Gardens were to be built and maintained by MacMillan Bloedel. However, two thirds of the original land cost was contributed equally by the municipal and provincial governments. Company records show that to date the gardens have received over \$525,000. The Vancouver Foundation, heavily supported by the MacMillan Bloedel executive, has endowed the gardens with grants exceeding \$1 million. The J.V. Clyne Bird Sanctuary, a new project, received a gift from the corporation amounting to \$2,916.

The Vancouver Public Aquarium, located in Stanley Park Zoo, is leased for a token sum from the City. Though it does not bear the name of any MacMillan Bloedel personnel, it has been intimately associated with the company throughout its history. The interconnection began with H.R. MacMillan's custom of taking a University of British Columbia marine biologist with him on his yearly yachting trips to Mexico. In 1956 this biologist was made the Director of the new Vancouver Aquarium. Before his death, MacMillan regularly brought back live sea animals to be given to the Aquarium; he also made financial contributions totalling at least \$150,000. His philanthropic donations led to the naming of the MacMillan Tropical Gallery in his honour.

Numerous members of the MacMillan Bloedel executive and their wives have in recent years made significant contributions to the Aquarium, both financial and administrative. Assistance has included fund raising,

service as officers and provision of facilities. Corporate financial donations have not been regular; MacMillan Bloedel gave \$10,000 to the Aquarium in 1966 and another \$50,000 in 1970.

The Fine Arts

MacMillan Bloedel's participation in the fine arts in British Columbia is probably the least significant of all its cultural activities. One observer of the Vancouver cultural scene remarked that in his experience in one European and three Canadian cities, Vancouver's corporations are in general more conservative and give less support to the fine arts than in other places. He also mentioned that British Columbia corporations are conspicuous when making donations. Anonymity is rarely an issue -- except when one organization could become jealous of the support given to another.

This seems an accurate appraisal of MacMillan Bloedel's record of philanthropy in the fine arts. Nevertheless, the firm and several of its directors and officers are regularly listed as donors in the records of the Vancouver Symphony, Art Gallery, Opera Association and Playhouse Theatre. Personal participation on governing boards has been primarily limited to the Vancouver Art Gallery (see Table III.15).

Education

In his introduction to MacMillan Bloedel's publication of 1975 Scholarship Awards the British Columbia Minister of Education, Patrick McGeer, wrote "the interaction of education and commerce is an integral part of society. One supports the other." The statement is particularly apt, for MacMillan Bloedel's most extensive record of financial and personal involvement with the Province's cultural institutions lies in the area of education, particularly post-secondary education.

For 21 years the company has granted academic awards. In addition to three general scholarships, it endows four others specifically related to forestry or forest technology. A new program offered in conjunction with the British Columbia Institute of Technology (BCIT), includes an employment offer during vacation periods. All four forestry scholarships are tenable only at UBC or BCIT.

The company records a total of \$190,300 charitable donations to educational scholarships and bursaries (primarily tenable in British Columbia) from 1965-75, with a median donation of \$16,750 annually. It is not clear if this sum includes all of its special scholarships and grants.

Members of the MacMillan Bloedel executive have also funded scholarship programs. Mark and Phae Collins have established a permanent bursary endowment to British Columbia's colleges and universities through the Vancouver Foundation. Also, H.R. MacMillan made extensive personal contributions to scholarships and fellowships at the University of British Columbia.

The bulk of the company's donations, however, are reserved for the universities, of which the University of British Columbia is clearly the largest single recipient. Originally, close ties between MacMillan Bloedel and the University of British Columbia developed when it was the only university in the province. The fourteen members of MacMillan Bloedel's executive who graduated from the University of British Columbia all did so before the province's two other universities, Simon Fraser and Victoria, were chartered in 1965. This lack of alumni, plus the fact that Simon Fraser has acknowledged a lack of aggressiveness to date in its approach to corporate fund raising, may partly explain the very strong orientation toward UBC shown by MacMillan Bloedel.

However, there are other reasons for this strong relationship. The University houses nearly all the province's professional schools, most notably in law and forestry; in fact, it is one of only two forestry schools in Western Canada. Thus MacMillan Bloedel's interest in UBC is straightforward: the university supplies the firm with a major share of its professional talent. Moreover, the university provides personnel for the provincial Forest Service, which has considerable responsibility for regulation of MacMillan Bloedel's activities. Over 85 per cent of the agency's professional foresters graduated from UBC, and the Forest Service attempts to hire much of its new staff from the university.¹⁰⁹

Data inadequacies make it difficult to tabulate total donations from MacMillan Bloedel, Ltd. and MacMillan Bloedel's directors and officers, to the University of British Columbia. The university's records indicate MacMillan Bloedel corporate donations from 1957-75 totalled \$1,494,673, of which \$840,000 was allocated through the Tri Universities capital fund drive.¹¹⁰

More importantly, these totals do not include personal donations. According to university records, UBC was generously favoured by H.R. MacMillan. From 1957-1975, the university has received a total of \$8,395,035 from MacMillan and his wife, either as personal donations or through one of three funds administered by the Canada Trust and Vancouver Foundation. This total does not include invested donations which will be dispensed over time.

Most notable of these gifts was a single personal donation of \$8.2 million made by MacMillan in 1965 to foster post-graduate education at UBC.¹¹¹ This was the largest private donation made to any Canadian university up to that time. MacMillan's will of 1976 directed a further \$50,000 to UBC in the name of one of his associates.

In recognition of H.R. MacMillan's contributions to the university and the province, the Forestry-Agriculture Sciences Building has been named the H.R. MacMillan Building, even though it was not specifically endowed by him. This building houses the School of Forestry and the MacMillan Library.

Personal contributions from other MacMillan Bloedel directors and officers have also been extensive. At least 25 MacMillan Bloedel executive members have made personal financial contributions to the University

of British Columbia. Notable are gifts from the other two founding members of the company, Prentice Bloedel and W.J. VanDusen. (See Table III.16)

MacMillan Bloedel personnel have also been active in the administration of the university. A.E. Grauer and J.M. Buchanan both have served as Chancellors Emeritus, a university's highest honorary position. Buchanan, Grauer and Bibbs have held chairs on UBC's Board of Governors, and numerous others have served on the Senate. Five MacMillan Bloedel executive members have served as President of the University of British Columbia's Alumni Association.

Ties to the remaining two provincial universities are much less striking. The University of Victoria received a percentage of the \$2 million MacMillan Bloedel contribution to the 1965 Tri-Universities Fund Drive. In addition, Victoria's Anthropology Department received a corporate donation of \$2,000 in 1974, and the university's predecessor, Victoria College, received a \$50,000 grant in 1960. In 1968, a MacMillan Bloedel executive member was appointed by the provincial government to serve on the university's Board of Governors.

Simon Fraser records shows a total of \$28,300 in corporate donations from MacMillan Bloedel since 1965, in addition to its share of the Tri Universities' Fund. Personal donations have been received from various executive members totalling \$30,250 of which \$27,500 was from a single source. J.O. Hemmingsen was a member of the Simon Fraser University Convocation and Mark Collins served on the Senate and Board of Governors from 1967 to 1970.

Elementary and secondary private schools have received some support. Following a pattern of sporadic donations, MacMillan Bloedel has made several contributions (over \$1,000) to four private schools. Of these, St. George's School for Boys, one of the province's most exclusive schools, has also had considerable support from individual MacMillan Bloedel executives. J.V. Clyne was a Governor from 1950-73. Twelve other members of the MacMillan Bloedel executive are financial patrons of the school. Jean Southam (daughter of MacMillan) after whom the Southam Lounge of the school is named, has also been an important financial donor.

The corporation has strongly supported young people's activities. This includes capital donations totalling \$44,500 since 1970 to the British Columbia YM-YWCA, as well as generous sums to various recreational activities such as summer camps, Little League Baseball, Minor Hockey, Boy's Clubs, Boy Scouts, Girl Guides, Outward Bound, etc. Junior Achievement of British Columbia is one of the few organizations (apart from universities) which have received annual support from MacMillan Bloedel. Junior Achievement is a popular business donation since it is an organization which teaches young people the skills of organizing and marketing a product by actually forming companies and carrying on a "business".

Foundation and Public Services

MacMillan Bloedel directors and officers have been active on both of the major philanthropic foundations of British Columbia. The younger and smaller of these is the Koerner Foundation, established in 1955 with a capital gift of \$1 million, followed by subsequent gifts from the two Koerner estates. Two prominent MacMillan Bloedel directors served on the foundation's Board of Governors between 1956 and 1968.

The grants of the Koerner Foundation follow a pattern already observed in the charitable donations of MacMillan Bloedel -- the largest sums go to educational and health activities with the fine arts trailing far behind. Also similar to the MacMillan Bloedel pattern, Koerner grants favour the University of British Columbia. For example, the most recent Foundation Report lists donations to the University of Victoria of \$16,890, to Simon Fraser University of \$14,000 and to the University of British Columbia of \$146,100 (including \$1,500 to Forestry and \$44,400 to 95 students as grants-in-aid). The Koerner Foundation provided \$600,000 toward the University of British Columbia Faculty Club, and \$400,000 for a Graduate Student Centre, the "Thea Koerner House (1961) and Extension (1971)."

MacMillan Bloedel is even more involved with the Vancouver Foundation which was founded in 1944 by W.J. VanDusen, a director and prime figure in the history of the company. VanDusen organized nine prominent Vancouverites, among them three other people associated with MacMillan Bloedel--H.R. MacMillan, A.H. Williamson, and Mrs. W. Farrell. Each of the ten donated \$10,000 to initiate what quickly became one of North America's fastest growing foundations. The Vancouver Foundation is now one of the ten largest community foundations in North America and by far the largest in Canada. Assets in 1975 totalled nearly \$50 million and in that year it distributed more than \$3 million, primarily to education, research and youth activities.

MacMillan Bloedel's directors are represented among the Vancouver Foundation directors by W.J. VanDusen as Chairman of the Board and also J.N. Nyland. Foundation grants in 1975 included \$25,000 to the Vancouver Public Aquarium and \$302,505 to the University of British Columbia. Of this \$302,505, 17 per cent was allocated to the Department of Forestry. Simon Fraser received a total of \$13,500 and the University of Victoria received no money.

Fund contributors include several individuals connected with MacMillan Bloedel as well as organizations with which MacMillan Bloedel directors or officers are closely associated, such as the Men's Canadian Club of Vancouver. The largest single personal fund in the foundation is that of Alma VanDusen, amounting to over \$14 million. In addition to the VanDusen Foundation Fund of over \$2 million there is also a separate VanDusen Forestry Fund. (See Table III.17 for MacMillan Bloedel related funds).

Aside from foundations, MacMillan Bloedel directors and officers are active on the boards of a number of public service institutions. These often coincide with corporate donations to these organizations. They include the Salvation Army, Canadian Red Cross, National Heart Foundation, Canadian Cancer Society, Community Chest and Council of Greater Vancouver,

and the Canadian Council for Christians and Jews, in addition to various hospital boards.

The general pattern of MacMillan Bloedel's philanthropic activity is summarized in Table III.18 which lists donations by the activity of the recipient for a four year period. Health oriented charities and public works (museums, parks, aquarium, etc.) are most heavily endowed, accounting for nearly two-thirds of total head office donations. Sports and outdoor recreation/preservation programmes along with the fine arts fare not so well with only 8.3 per cent of the total.

The Media

MacMillan Bloedel does not directly own any media interests. It has no publishing or broadcasting subsidiaries. Its interests, however, frequently overlap those of the media. Several of its directors hold executive positions with firms connected with printing and publishing. Foremost among these is H.R. MacMillan's son-in-law, Gordon Southam. Southam is a member of the Southam family which directs the various Southam interests. In 1975, with 17 dailies and a combined circulation of 942,000, Southam Press was the largest newspaper chain in Canada.¹¹³ As the Senate Committee on Mass Media noted about the Southam holdings, "While it is estimated that no single interest holds more than 3.6%, control over the company is exercised by a large number of persons related to the Southam family by birth and marriage."¹¹⁴ MacMillan Bloedel's interests entered this consortium with the marriage of H.R. MacMillan's daughter, Jean, to Gordon T. Southam, who has since been a director of MacMillan Bloedel. He is also a director and shareholder in Southam Press Ltd. and President of Pioneer Envelopes Ltd.

Southam Press, in turn, has links with FP Publications (the second largest newspaper chain in Canada) through joint ownership of Pacific Press which publishes both of Vancouver's dailies, the Sun and the Province. Southam also owns the Prince George Citizen. FP Publications owns eight dailies, including both Victoria dailies, the Times and Colonist, and has interests in two cable companies.¹¹⁵ These five newspapers represent a total circulation of 446,822 in a province with a total population of about 2,452,000.¹¹⁶

There are additional directorship ties between MacMillan Bloedel and both Southam and FP Publications. The Chairman of the Board of Pacific Press is J. Norman Hyland, a director of MacMillan Bloedel since 1967.

Another MacMillan Bloedel director, G.H.D. Hobbs, also sits on the board of Pacific Press. Hyland, along with Gordon Southam, is also a director of Southam Press. W.C. Riley is an ex-director of both MacMillan Bloedel and Southam.

MacMillan Bloedel's ties with the media go beyond Southam Press. Robert Bonner (Chairman and Director of MacMillan Bloedel until 1973) was also a director of Canadian Cable Systems Ltd. This company's holdings include 48.8 per cent of Famous Players Ltd. and 20 per cent of Alberni (B.C.) Cable TV Ltd.¹¹⁷ Another MacMillan Bloedel director, H.T. Mitchell is the President and Chairman of Mitchell Press Ltd., a book publishing and commercial

printing interest, established in 1928. For four years prior to that date, Mitchell worked as Business Editor for the Vancouver Sun.

Mark Collins, a long time director of MacMillan Bloedel, was also President of Smith Lithograph Co. Ltd., a printing company. Collins' wife, Phae, is the daughter of W.J. VanDusen, one of the founding powers of the company.

These extensive inter-relations in both directors and corporate ownership patterns are impressive. What is even more interesting are the ties between the media.

Southam Press Ltd. owns 30 per cent of the voting shares and 38 per cent of the non-voting shares of Selkirk Holdings, which has interests in the communication industry all across Canada.¹¹⁸ It is of note that MacMillan Bloedel director, J. Norman Hyland, is a director of Pacific Press, Southam Press, and Selkirk Holdings. Selkirk and its wholly owned subsidiary, Castletron Investments Ltd., hold approximately 12 per cent and 29 per cent interest respectively, in the British Columbia Television Broadcasting System Ltd. (BCTV).¹¹⁹ BCTV owns fifteen British Columbia television stations and 108 of 109 common shares (99 per cent) of CHEK-TV Ltd., the CBC outlet in Victoria.¹²⁰ BCTV also holds 33 1/3 per cent of Okanagan Valley TV Co. Ltd. which is licensee of nine Okanagan television stations. In addition BCTV holds four broadcast stations in the Okanagan Valley and Kamloops, providing CTV service to this area. In 1973 this service was extended to the north-centre of British Columbia including the city of Prince George.

In addition, Selkirk holds 100 per cent of All Canada Radio and T.V. Ltd. which operates as a national sales agency for 70 AM and FM radio and television stations across Canada. All Canada has a sales office in Vancouver. Before Selkirk obtained the company, two of the major shareholders in All Canada Radio Facilities were FP Publications and Southam Press. Selkirk also holds 45 per cent of Canastel Broadcasting Co.¹²¹ which it owns with Western Broadcasting Co. Ltd. Western Broadcasting directly and through its subsidiaries holds 50.3 per cent of BCTV and is in turn partially owned by Canadian Pacific Ltd. which is the largest single shareholder of MacMillan Bloedel Ltd.¹²² As of 1976 Selkirk wholly owned CKWV Radio Ltd. and CKWX-SW in Vancouver and Island Broadcasting Co. Ltd. (Radio CJVI, Victoria). With its subsidiary, Lethbridge Broadcasting Ltd., it also owns Interior Broadcasters Ltd. (Radio CJIB, Vernon, B.C.) which in turn owns the remaining third of Okanagan Valley TV Co. Ltd. Finally, Selkirk's subsidiaries also give it interests in TV commercial production and distribution, motion picture production and phonograph record and cassette tape manufacturing and distribution.¹²³

In addition to these ownership links the firm has conventional economic dealings with the media. It is a purchaser of advertising and a seller of newsprint. We do not have detailed information on MacMillan Bloedel's advertising expenditures. However, the firm does employ three advertising agencies, and has placed ads in newspapers, consumer magazines, farm and business papers, radio and television.¹²⁴ Because company sales are minimal

at the retail level, it is safe to assume that its advertising is focused on public relations. For example, in 1973, the company ran a twelve page full colour picture story in Time and MacLean's magazines (Canadian editions) which aimed at promoting a favourable corporate image. The same ad ran in the previous fall in the Vancouver Sun.¹²⁵ Altogether this presentation reached over one million readers.

MacMillan Bloedel's most striking relation to the media, however, is in terms of its dominant position in the newsprint market in British Columbia (see Chapter II). Newsprint is the single most important material input in newspaper production, accounting for some 63 per cent of the cost of materials (exclusive of wages and salaries), and 17 per cent of total revenue spent.¹²⁶

MacMillan Bloedel provides roughly 60 per cent of the total newsprint needs of British Columbia at prices lower than elsewhere on the West Coast.¹²⁷ This price difference was explained by a representative of the firm frankly, "Newsprint prices in British Columbia are lower than anywhere else on the U.S. West Coast for political reasons." Whether its links with the media through interlocking directorships, and marriage and family ties and its largesse in the form of newsprint price concessions gain the firm a preferential editorial policy from the major British Columbia newspapers is unclear. Nevertheless, the links and the price concessions are facts.

CONCLUSION

The foregoing sections have established that the Directors and Officers of MacMillan Bloedel fit the pattern of the Canadian corporate élite, and that both the company and the firm's executive have extensive interaction with provincial cultural institutions. From this we can draw several conclusions.

First, it would be precipitous to conclude that participation of MacMillan Bloedel or its executive in cultural institutions leads to direct corporate control of these institutions. This has been a common assumption in previous studies of corporate behaviour, especially with regard to the media. What élite structures and corporate participation do create are patterns of influence that vitally affect the shape of all cultural institutions. The privileges of the élite allow them access to important positions in our cultural institutions. In these positions they make decisions which, as Smythe describes, "set an 'agenda' which selects some topics and ignores others, gives precedence to some and not others, and frames contexts and selects content all according to standards which perhaps owe more to custom than to malevolent design, and more to unconscious synchronization of decisions than to conspiracy."¹²⁸ In the case of MacMillan Bloedel, the company's cultural connections and donations and the resulting personal and corporate prestige coupled with actual economic power (not necessarily ownership) give it a legitimacy that establishes influence over these institutions.

There are a number of reasons for financial contributions other than pure altruism. First it should be recognized that donations, corporate or personal, are in part subsidized by the public. Such donations are generally tax deductible and thus cost the public in terms of foregone revenue.

MacMillan Bloedel's donations, scholarships, bursaries and awards of over \$6.5 million in the past ten years¹²⁹ were borne both by the firm and the public.

Second, philanthropic activities are good public relations. They help to create an uncritical public atmosphere. Recipients dependent on corporate donations are not likely to question the motives of the donor or refuse the gift on moral grounds.

Third, corporate participation in cultural activities provides personal status for individual Directors and Officers and legitimizes the corporate function in the community. It also opens avenues to further business connections.

Fourth, gifts carry influence. Corporations or individuals who have sufficient wealth to be in the position of "donor" hold significant power on two counts. Governing positions on charitable institutions, particularly Foundations, offer an important voice in deciding where the money goes. It is only natural that Directors and Governors will direct funds primarily to those who share their own interests and values; also, despite the fact that money is granted as a gift, it carries with it the assumption that the interests of the grantor will not be ignored. The very process of applying for grants, meeting with grants' executives and framing grant proposals, begins to affect the character of the application. By an inherent process of self-censorship on the part of the applicant (out of loyalty to the verbal and intellectual commitment they have made no matter how seriously intended, and, of course, out of a desire to be eligible for future funds) the proposal takes on the direction and character expected of it by the donor.

Finally, certain types of donations can bear direct benefits to the firm. For example, heavy support of forestry education helps both to ensure that the firm can recruit qualified personnel for its operations and that those graduates who enter the public sector recognize that the private firms which they regulate have directly or indirectly subsidized their education.

Corporate giving by MacMillan Bloedel has apparently followed a pattern described by Jacoby as "enlightened self-interest."¹³⁰ The firm devotes resources to improving the environment in which it operates, because in many respects it is dependent upon the goodwill of society for successful operations. As an example, the predominance of gifts to higher education (particularly to the University of British Columbia) is clearly in the firm's interests. The company's choice of recipients follows a pattern established by corporations in the United States, in which the predominant fraction of corporate gifts are made to schools, welfare and civic agencies or communities where the donor operates facilities and so derives rather specific benefits.¹³¹

Table III.12

MACMILLAN BLOEDEL DIRECTORS AND
OFFICERS CONSIDERED IN THIS STUDY

(AS OF ANNUAL REPORTS TO 1975)

<u>Name</u>	<u>Position</u>	<u>Year(s)</u>
Andrews, I.H.	Officer	1960
Baxter, D.A.	Director	1961-63
Bibbs, R.M.	Officer	1966-73
Bloedel, Prentice	Director	1960-71
Bonner, R.W.	Officer/Director	1968-73
Bowell, G.S.J.	Officer	1963
Brown, F.H.	Director	1960-69
Buchanan, J.M.	Director	1960-71
Christopher, A.B.	Director	1966-present
Clyne, J.V.	Officer	1960-72
	Director	1960-present
Collins, Mark	Director	1960-69
Cox, L.A.	Officer	1965-present
Crump, N.R.	Director	1969-71
Currie, G.B.	Officer	1965-present
	Director	1970-present
Downes, P.M.	Officer	1964-present
Farrell, Gordon	Director	1961-71
Foley, Harold Scanlon	Director	1960
Foley, Milton Joseph	Director	1960
Forgacs, O.L.	Officer	1974-present
Gillen, Ralph L.	Officer	1969-present
Grauer, Albert E.	Director	1960
Hemmingsen, John O.	Officer	1961-present
	Director	1965-present

Hobbs, G.H.D.	Director	1972-present
Hyland, J. Norman	Director	1967-present
Lawson, J.H.	Officer	1968-present
Lecky, John	Director	1960-70
Letson, Maj. Gen. H.F.G.	Director	1960-61
MacMillan Harvey R.	Director	1960-76
McKinnon, N.J.	Director	1972-74
Miller, R.G.	Director	1963-67
Mitchell, H.T.	Director	1960-73
Moorhead, H.P.J.	Officer	1960-62
Richardson, J.E.	Director	1967-present
Riley, W.C.	Director	1960-61
Rogers, J.S.	Officer	1969-present
Shaw, R.M.	Officer	1960-63
	Director	1960-64
Sinclair, I.D.	Director	1972-present
Southam, G.T.	Director	1960-present
Stenason, W.J.	Director	1974
Taylor, J.A.	Director	1972-present
Timmis, D.W.	Officer	1966-76
	Director	1970-76
Townsend, H.V.	Officer	1963-present
VanDusen, W.J.	Director	1960-present (Honourary)
Wallace, Col. the Hon. C.	Director	1960
Williamson, A.H.	Director	1960

Table III.13

MARRIAGE TIES

<u>Name</u>	<u>Married</u>
Virginia, daughter of Prentice Bloedel	Charles B. Wright Jr., Pres. of Pentagram Corp. (Seattle) and Director of MB
Phae, daughter of W.J. VanDusen	Mark Collins, Pres. of Smith Lithograph Co. Ltd. and Director of MB
Edna Marion, daughter of H.R. MacMillan	John Lecky, Pres. of Smith, Davidson & Lecky Ltd. and Director of MB
Jean, daughter of H.R. MacMillan	Gordon T. Southam, member of the Southam family communications complex and Pres. of Pioneer Envelopes Ltd. and Director of MB.

Table III.14

CORPORATE DIRECTORSHIP HOLDINGS OF
SELECTED MACMILLAN BLOEDEL DIRECTORS
1960-1976

Christopher, A.B.

President: Montrose Developments Limited
Nelson Launderies and Drycleaners
Nelson Enterprises

Chairman: Neon Products of Canada Limited

Director: Royal Bank
MacMillan Bloedel Limited
Hayes Manufacturing Co. Limited
Straits Towing Limited
Glulam Products Limited
Amco Services Limited
B.C. Highweight Aggregates Limited
British Columbia Power Corporation
James Lovic & Company
Castle Oil and Gas Company Limited
Montreal Trust Company
Ocean Cement

Collins, Mark

President: Smith Lithograph Company Limited

Director: MacMillan Bloedel Limited
Mercantile & General Reinsurance Company of
Canada Limited
Ocean Cement & Supplied Limited

Member: Vancouver Advisory Board of Canada Trust Company

Farrell, Gordon

President: B.C. Telephone Company (until retirement in 1958)

Chairman: Ocean Cement Limited
Ocean Cement and Supplies Limited

Director: The Canada Trust Company
MacMillan Bloedel Limited
British Columbia Packers Limited

Hobbs, Gerald H.D.

President: Cominco Limited (also Director)

Director: B.C. Telephone
Bank of Nova Scotia
MacMillan Bloedel Limited
Okanagan Helicopters Limited
Pacific Coast Terminals Company Limited
Western Canada Steel Limited
White Pass & Yukon Corporation
Pacific Press
Pine Point Mines Limited
Dillingham Corporation (Honolulu)
Hawaiian Western Steel Limited (Honolulu)

Hyland, James Norman

President: Granduc Mines (also Director)

Chairman: Pacific Press Limited
Selkirk Holdings Limited

Hyland, James Norman (cont'd)

Director: Vancouver Foundation
 MacMillan Bloedel Limited
 North American Life Association
 Southam Press
 Inland Natural Gas
 Woodward Stores

Richardson, J. Ernest

Chairman, President, Director and Chief Executive
Officer of B.C. Telephone Company

President and Chairman of Okanagan Telephone Company

Vice-President and Director of Imperial Bank of Commerce

Director: Halifax Insurance Company
 Commercial Life Assurance Company of Canada
 Placer Development Limited
 MacMillan Bloedel Limited
 Canada Lafarge Cement
 Westcoast Transmission Company Limited

Timmis, Dennis William

President and Chief Executive Officer of MacMillan Bloedel Limited

Director: Canadian Pacific Limited
 Canadian Imperial Bank of Commerce
 Canadian General Electric

Table III.15

CHARITABLE DONATIONS BY MACMILLAN BLOEDEL LTD.
TO SELECTED INSTITUTIONS OF THE FINE ARTS, AND
PARTICIPATION ON GOVERNING BOARDS
(1966 - 1975)

Vancouver Symphony (Public)

Donations

1975	\$ 5,000
1974	6,500
1973	5,000
1972	5,000
1968	2,500
1967	2,000
1966	2,000
	<hr/>
	28,000

Vancouver Art Gallery

Donations

1974	1,500
1973	
1972	1,000
1971	500
1970	1,000
1969	1,000
1968	500
1967	1,500
1966	500
	<hr/>
	8,500

Vancouver Art Gallery (cont'd)

Participation on Boards

P. Bloedel - Life member

R.W. Bonner - Donor

Kathleen Farrell (daughter of G. Farrell) - Donor

P. Downes - President

G. Farrell - Life governor and member

Sherry Grauer (daughter of A.E. Grauer) - Trustee and Honourable Secretary

Marion Lecky (Wife of J. Lecky) - Life member and Patron

Mr. and Mrs. J. Rogers - Founding members

Mr. and Mrs. G. Southam - Life members

Vancouver Opera Association (Public)

Donations

1975	unspecified, listed as benefactor
1974	\$ 1,000
1972	250
1970	250
1969	500
1968	100
1967	250
	<hr/>
	2,350

Participation on Boards

H.S. Foley - Governor

Mrs. H.R. MacMillan - Governor

J.E. Richardson - Governor

Playhouse Theatre (Public)

Donations

1972	\$ 2,000
1971	1,500
1970	2,500
1969	2,500
1968	1,000
1967	5,000
1966	5,000
	<hr/>
	19,500

Source: MacMillan Bloedel

Table III.16

DIRECTORS AND OFFICERS OF MACMILLAN BLOEDEL AS
DONORS TO U.B.C.
(1960-1976)

Donor	Amount (where available)
Prentice Bloedel	\$ 85,399
R.W. Bonner	
F.H. Britton	
F.H. Brown	
J.M. Buchanan	(over \$10,000)
A.B. Christopher	
J.V. Clyne	8,000
Mark Collins	
G. Farrell	25,000
H.S. Foley	(over \$45,000)
M.J. Foley	
R.L. Gillen	
A.E. Grauer	15,000
L.G. Harris	
J.N. Hyland	
E.G. Legg	
A.P. MacBean	
H.R. MacMillan	(over \$8 million)
H.T. Mitchell	
E.G. Shorter	
S.G. Smith	
C.A. Specht	
W.J. VanDusen	283,000
Hon. C. Wallace	
A.H. Williamson	100,000

Source: University of British Columbia Records.

Table III.17

CLOSED PRINCIPAL FUNDS (I.E. PERSONAL FUNDS)
OF MACMILLAN BLOEDEL DIRECTORS AND OFFICERS,
ADMINISTERED BY THE VANCOUVER FOUNDATION

1975

<u>Name</u>	<u>Total</u>
The Donald A. Baxter Fund	\$ 53,097
The Mark Collins Fund	214,003
The Mark and Phae Collins Fund	197,500
The Harold Scanlon Foley Jr. Memorial Fund	22,864
The H.R. MacMillan Educational Fund	20,900
The H.R. MacMillan Family Fund	697,316
The George W. and Mary O'Brien Fund	100,000
The Alma VanDusen Fund	14,184,135
The W.J. VanDusen Forestry Fund	65,325
The VanDusen Foundation	2,292,654

Source: Vancouver Foundation.

Table III.18
 MACMILLAN BLOEDEL HEAD OFFICE*
 CHARITABLE DONATIONS BY ACTIVITY OF RECIPIENT
 1972 - 1975

	M \$	Per cent
Health (1)	724.6	37.5
Public Works (2)	536.3	27.8
Education	163.8	8.5
Sports and outdoor recreation (3)	104.2	5.3
Fine arts	57.7	3.0
Other	343.1	17.7
TOTAL	1,930.0	

*

Head Office donations accounted for over 80 per cent of total donations in the 1972 - 1975 period.

- (1) Includes United Fund, Salvation Army, and other health oriented charities.
- (2) Museums, Aquarium, etc.
- (3) Includes Boy Scouts and wildlife protection agencies.

Source: MacMillan Bloedel.

NOTES

1. See D.P. Warwick and J. G. Craig, "The Social Consequences of Corporate Concentration in Canada," Brief Submitted to the Royal Commission on Corporate Concentration, mimeo, York University, December, 1975, for a discussion of extra-market effects of corporate concentration.
2. See Chapter I
3. F.L.C. Reed and Associates, The British Columbia Forest Industry; Its Direct and Indirect Impact on the Economy, Vancouver, 1975, p. 64.
4. This concept is well developed in the literature of regional economics; see W. Isard, Methods of Regional Analysis, Boston, Mass. Institute of Technology Press, 1960, Chapter 6.
5. F.L.C. Reed, op. cit., p. 50
6. British Columbia, Department of Economic Development, The Mid-Coast Report-76, Victoria, 1976.
7. F.L.C. Reed, op. cit., p. 49.
8. MacMillan Bloedel, Brief Submitted to the Royal Commission on Forest Resources, Prince Rupert, September, 1975. See this reference for a complete discussion of facilities operated by MacMillan Bloedel in the Coastal Region.
9. District of Powell River, Administrator's Office, personal interview.
10. Statistics Canada, "User Summary Tapes," 1971 Census.
11. Rex Lucas, Minetown, Milltown, Raitown, Toronto, University of Toronto Press, 1971, p. 67
12. District Economist, Vancouver Island Area, Economic Analysis and Forecasts Branch, Canada Manpower, personal interview
13. Industrial Relations Manager, Powell River Division, MacMillan Bloedel, personal interview.

14. This multiplier was derived through an economic base analysis (see Footnote 5) of 1971 census data which described employment by sectors in Powell River.
15. Industrial Relations Manager, Powell River Division, MacMillan Bloedel Ltd., personal interview.
16. Canada Manpower Officer, Powell River, B.C., personal interview.
17. University of British Columbia, School of Community and Regional Planning, Approaches to Planning in the Powell River Regional District, May, 1974, p. 75.
18. British Columbia, Department of Lands, Forests and Water Resources, "Public Inquiry into Waste Management in the Forest Industry," Vol. 7, exhibit 32, August, 1970.
19. British Columbia, Department of Economic Development, "Skeena-Queen Charlotte Regional Economic Study," 1973, p. 27. Hereafter cited as "Skeena Study."
20. Statistics Canada, 1971 Census, User Summary Tapes.
21. British Columbia, "Skeena Study," op. cit., p. 41.
22. Skidegate Band Council, Submission to the British Columbia Royal Commission on Forest Resources, Prince Rupert, 1975.
23. "Indians challenge...", Vancouver Sun, September 12, 1975, p. 44.
24. A. D. Scott and R. A. Schearer, Submission to the British Columbia Royal Commission on Forest Resources, Vancouver, 1975.
25. British Columbia, "Skeena Study," op. cit., p. 49.
26. G. Sloan, Report of the Commissioner Relating to the Forestry Resource in British Columbia, King's Printer, Victoria, 1946.
27. T. Dease, Timber Rights and Forest Policy, V. 1, Victoria, 1976, p. 39
28. See for example, "Socreds Blasted on New Forest Deal," Vancouver Sun, April 20, 1955; or more recently, The Truck Loggers Association, Brief Submitted to the Royal Commission on Forest Resources, Vancouver, November, 1975

29. Task Force on Crown Timber Disposal, Forest Tenure in British Columbia, Victoria, 1974, p. 95.

30. G. Sloan, op. cit., "Evidence and Proceedings."

31. K. Reed and D. Weaver, "Aspects of the Political Economy of the B.C. Forest Industry," Essays in B.C. Political Economy, P. Knox and P. Resnick, editors, New Star Books, Vancouver, 1973, pp. 18-20.

32. H.R. MacMillan, Brief Presented Before the British Columbia Royal Commission on Forestry, Vancouver, 1944, pp. 26-28.

33. Bloedel, Stewart and Welsh, Brief Submitted to the Royal Commission on Forestry, Vancouver, 1944.

34. K. Reed and D. Weaver, op. cit., p. 19.

35. MacMillan and Bloedel Ltd., Brief of Argument Submitted to the Royal Commission on Forestry, British Columbia, July 4, 1956, pp. 33-40. Hereafter cited as Brief of 1956.

36. Ibid.

37. "Bentley Lashes at Brief Submitted by MacMillan," Vancouver Sun, August 24, 1956.

38. MacMillan Bloedel Ltd., Brief Submitted to the Royal Commission on Forest Resources, Vancouver, 1975, p. 1. Hereafter cited as Brief of 1975.

39. Ibid., pp. 41-85.

40. The MacMillan Bloedel position was subsequently discussed in its Summation Submission to the Royal Commission on Forest Resources, Vancouver, 1976, pp. 4-14. Hereafter cited as Brief of 1976.

41. "Breaking of Contracts Refuted," Vancouver Province, December 11, 1975.

42. MacMillan Bloedel, Brief of 1975, op. cit., pp 210-225.

43. MacMillan Bloedel, Brief of 1956, op. cit., p. 44.

44. MacMillan Bloedel, Brief of 1975, op. cit., pp. 1-11.

45. "Planning Guidelines for Coast Logging Operations," Correspondance to all licencees in the Coast Region of British Columbia, from I. T. Cameron, Chief Forester, B.C. Forest Service, September, 1972.
46. Ibid.
47. Correspondance to the Honourable R. A. Williams, Minister of Lands, Forest, and Water Resources, from J. R. Forrest, Group Vice-President, MacMillan Bloedel, October 7, 1974.
48. Ibid.
49. MacMillan Bloedel, "Annual Report (1974) to the U.S. Securities and Exchange Division," Form 10-K, July 25, 1975, p. 14.
50. "Forest firms propose waste plan," Vancouver Sun, August 14, 1970, p. 13.
51. "B.C. pollution branch eases up in mill code." Vancouver Province
52. "CFI urges more realistic pollution control aims," Vancouver Province, September 15, 1971.
53. Vancouver Sun, June 25, 1971.
54. "Pollution probe gets big yawn," Vancouver Province, March 4, 1976, p. 20.
55. Council of Forest Industries, Brief to Public Inquiry, Pollution Control Objectives, Forest Products Industry, March, 1976. The MacMillan Bloedel brief is included as an Appendix in this reference.
56. MacMillan Bloedel, Submission to the Royal Commission on Corporate Concentration, Vancouver, 1975, p. D-4.
57. "MB won't face charges, residents want explanation," Vancouver Sun, February 18, 1975.
58. See the discussion regarding the Powell River Anti-pollution Group in the section entitled "Community Impacts."
59. Speech by Denis Timmis, MacMillan Bloedel, to the 7th Air and Stream Improvement Conference, Canadian Pulp and Paper Association, Vancouver, B.C. September, 1972

60. Ibid.
61. MacMillan Bloedel, 'Brief of 1975, op. cit. Appendix II.
62. MacMillan Bloedel, Submission to the Royal Commission on Corporate Concentration, op. cit. p. C-3.
63. North Islands Study Group, "Tsitika-Schoen Resources Study," prepared for the Environment and Land Use Committee, British Columbia, Victoria, 1975.
64. Ibid.
65. Nanaimo Fish and Game Protective Association, Submission to the Public Hearing on the Tsitika-Schoen Controversy, Nanaimo, March 14, 1975, p. 64.
66. "Govt to probe MB land use plan," Vancouver Sun, March 17, 1972. See also "MB's Gulf Islands plans will be opposed 'by law' ,"
Vancouver Sun, October 12, 1972, and "Gulf Island sub-division opposed," Vancouver Province, October 25, 1975.
67. Interview with biologist employed by the provincial Fish and Wildlife Branch
68. MacMillan Bloedel, "Brief of 1975," op. cit., pp. 120-147.
69. Ibid., pp. 207-209.
70. loc. cit.
71. MacMillan Bloedel, private correspondence.
72. "I.W.A. strike ends after 45 months," Vancouver Province, March 20, 1976.
73. MacMillan Bloedel, Submission to the Royal Commission on Corporate Concentration, op. cit., p. D-12.
74. "Job rotation pays off," Vancouver Province, May 27, 1974.
75. MacMillan Bloedel.
76. For an interesting account of the less than prim behaviour of the pioneers of the company see Martin Robin, The Rush for Spoils, Toronto, McClelland and Stewart, 1972.
77. "Hoping for peace with NDP," Vancouver Province, October 30, 1974, and "NDP taken to task on forestry," Vancouver Sun, October 11, 1974.

78. Ibid., October 11, 1974.

79. "MB hits back at bums," Vancouver Province, September 27, 1972.

80. "Lewis keeps battle going," Vancouver Province, September 29, 1972.

81. "MacMillan Chief Tells Business to Improve its Communication," Vancouver Sun, Thursday, February 17, 1977, p. 36.

82. British Columbia Council of Forest Industries (COFI), Annual Report, 1975, no pagination.

83. Harry Smith and Gilles Lessard, Forest Resources Research in Canada, Ottawa, Queen's Printer, 1970, p. 91

84. COFI, op. cit.

85. R. Schwindt, "The Effects of Economic Integration on Industrial Structures--The Case of France, Italy, and West Germany," unpublished Ph.D. thesis, Berkeley, 1973, pp. 170-72.

86. "Stipend \$3,750 a Month," Vancouver Sun, February 23, 1977, p. 1

87. "MB bashful on tenure," Vancouver Province, December 20, 1975.

88. MacMillan Bloedel, "Brief of 1976," op. cit., p. 57-61.

89. P. Pearse, op. cit., p. 103.

90. G. Currie, Address to Shareholders by G.B. Currie, Chairman of the Board, April 23, 1975, Vancouver, B.C.

91. H. Southam, "\$450 Million B.C. Boost in MacBlo Modernization," Vancouver Sun, February 24, 1977, p. 75.

92. Government of Canada, Foreign Direct Investment in Canada, Ottawa, Information Canada, 1972, pp. 291-292.

93. Frank Parkin, Class Inequality and Political Order, London, Paladin, 1971, p. 81; cited in Wallace Clement, The Canadian Corporate Elite, Toronto, McClelland and Stewart, 1975, p. 275.

94. John Porter, The Vertical Mosaic, Toronto, University of Toronto Press, 1965; Wallace Clement, op. cit.

95. Wallace Clement, op. cit., p. 5.

96. The word "men" is to be understood literally as exclusive of women throughout this Report. MacMillan Bloedel has never had a female director or officer.
97. These include primarily the Financial Post Directory of Directors (1960-1975), The Canadian Who's Who (1960-1975), newspaper clippings and biographical files.
98. Clement, op. cit., p. 125.
99. Ibid., p. 225.
100. Peter Newman, The Canadian Establishment, Vol. 1, Toronto, McClelland and Stewart, 1975, p. 235.
101. Ibid., p. 206.
102. Ibid., p. 234.
103. Ibid., p. 191.
104. Ibid., p. 244.
105. Ibid., p. 242.
106. Ibid., p. 248.
107. "Directors to set up Institute of Research," Toronto Globe and Mail, March 8, 1972, p. B2.
108. Newman, op. cit., p. 236.
109. Personnel Department, British Columbia Forestry Service, personal interview.
110. The University's records indicate that they received \$2 million from MacMillan Bloedel through the Tri-Universities drive. However, the funds were allocated 42% to UBC, 42% to Simon Fraser, and 16% to the University of Victoria.
111. "Huge Gift Sets Record," Vancouver Sun, February 10, 1965, p. 1.
112. "Foundation giving extra \$400,000 gift," Vancouver Province, December 16, 1975, p. 21.
113. Patricia Anderson, "Report on the Media. Newspapers: the front page of the future may be an index of 'reward units'," Financial Post, May 1, 1976, p. S5.
114. Report of the Special Senate Committee on Mass Media, Ottawa, Information Canada, 1970, II, p. 101.
115. Clement, op. cit., p. 312.

116. Canadian Advertising Rates and Data, March 1976,
Circulation of Vancouver Sun - 236,743; Vancouver Province - 126,533; Victoria Daily Times and Colonist (combined) - 65,850; and Prince George Citizen - 17,696.

117. "Report on the Media. Ownership: Where the Power is Concentrated in the Canadian Media." Financial Post, May 1, 1976, p. S4.

118. Canadian Radio-Television Commission, Ottawa, Queen's Printer, 1970, British Columbia Television Broadcasting System, Ltd.

119. Financial Post Corporate File, Selkirk Holdings Ltd. p. 3.

120. Canadian Radio-Television Commission, B.C.T.V. Broadcasting System.

121. Financial Post Corporate File, Western Broadcasting Company, Limited, July 7, 1976, pp. 3-4.

122. Financial Post Corporate File, Selkirk Holdings Ltd., pp. 2-3.

123. Financial Post Corporate File, Selkirk Holdings Ltd., p. 2.

124. The National List of Advertisers, Toronto, McLean Hunter, 1976.

125. Vancouver Sun, January 23, 1973.

126. G. E. Anderson and T. Hopkins, "An Examination of North America's Daily Newspaper Industry," unpublished manuscript, Simon Fraser University, Burnaby, 1976, p. 11.

127. From Chapter II.

128. Dallas W. Smythe, "The Role of Mass Media and Popular Culture in Defining Development," unpublished manuscript, Simon Fraser University, Burnaby, 1974, p. 2.

129. MacMillan Bloedel.
130. Neil H. Jacoby, Corporate Power and Social Responsibility, New York, MacMillan, 1973, pp. 198-199.
131. Kenneth Patrick and Richard Fells, Education and the Business Dollar, New York, MacMillan, 1969, as cited in Jacoby, Ibid., p. 205.

we can determine if this support has been good or bad, adequate or inadequate. We can however indicate that the firm has been very generous in its support of education relevant to the forest based industries, and that it has maintained a high profile in its gift giving. We can also note that the firm has numerous ties with the media and that its directors and officers belong to that group of Canadians which sociologists define as the nation's élite.

POLICY RECOMMENDATIONS

With respect to appropriate controls over the growth, existence and exercise of power emanating from corporate concentration we have the following comments to make.

Firstly, public policy can incite corporate concentration. In our study of the development of MacMillan Bloedel it became quite clear that the firm's growth was directly related to its holding of the raw material timber. Its drive for secure timber holdings in turn was a response to the provincial government's policy of allocating large tracts of public timber land to private enterprise for very long periods of time. The firm was presented with the choice of either availing itself of these cutting rights or standing by and witnessing the supply of its primary input dwindle as other firms integrated backward into the holding of timber. It opted for the first alternative, and was exceedingly successful at it.

Secondly, deconcentration of timber holding, logging, sawmilling, plywood manufacture and corrugated container manufacture seems feasible with respect to production technology. Strong evidence of significant economies of vertical integration and/or efficiencies of multi-plant, multi-product operations could alter this conclusion. The responsibility for the provision of such evidence should be borne by the large forest products firms. However, deconcentration is not in the tradition of Canadian anti-combines policy. We believe it should be.

Thirdly, existing legislation, primarily the Combines Investigation Act, is adequate to control the growth of corporate concentration through merger. As presently interpreted, however, the legislation is ineffective. MacMillan Bloedel's present position is in large part the result of mergers with other forest-based corporations (i.e., Bloedel, Stewart and Welch, and the Powell River Company). Under a less narrow interpretation of Section 33 of the current Combines Investigation Act these mergers would, at a minimum, have been questioned.

That Canadian merger law presently provides a weak deterrent to horizontal mergers is evidenced by a recent newspaper report which speculates on a possible merger partner for MacMillan Bloedel.

...an analyst...suggested it might be Domtar Ltd., the Montreal-based paper and chemical company. He says it has money for a cash purchase and was looking for acquisitions.

Fuelling the idea is the fact that Domtar's parent, Argus Corporation, recently sold its six per cent holding in B.C. Forest Products for an estimated \$12 million and so far has apparently not reinvested it....

Consolidated Bathurst of Montreal is another possible buyer although analysts here doubt either it or its parent, Power Corporation, would come up with the ready cash.⁴

It is remarkable that knowledgeable people could discuss a possible merger between the largest Canadian forest products firm and the second or third largest, with absolutely no mention of the possible applicability of the Combines Investigation Act.

Moreover, had combines legislation been enforced with respect to its competitors a number of MacMillan Bloedel's acquisitions might not have taken place. The move into corrugating container manufacture is a clear example. Confronted with a rapidly narrowing market for its linerboard as other board producers absorbed independent packaging companies, the firm responded by acquiring its own corrugating facilities. If the market for linerboard had remained open there would have been little incentive for this move.

Fourthly, reduction of protective tariffs would do much to increase competition in two industries where we have identified problems--namely plywood and fine papers. Already American firms have made incursions into these markets and in so doing have increased the vigour of competition. Complete elimination of tariffs for these products would reduce seller concentration and thus reduce the potential for the abuse of market power.

This loss of protection would be more palatable to the firms affected if it were accompanied by reduction of tariffs on the capital goods which they import.

Fifthly, Canadian disclosure law is inadequate. First, legislation is needed to require large corporations to disclose the direction and magnitude of their political donations. Second, multi-product firms should be required to report, in detail, their activities in individual industries. The aggregation of data has hampered this study and will continue to hamper both researchers and policy makers.

Finally, it must be realized that public agencies, not private firms, have the responsibility for setting clear standards for corporate behaviour in nonmarket dimensions. For example, if the public wants the managers of its resources to exhibit greater sensitivity to environmental impacts it must give to these managers clear standards and it must compel these managers to meet the standards on a continuing basis. Self-regulation is simply inadequate.

NOTES

1. U.S. vs. Aluminum Company of America, 148 F. 2d, p. 428. Quoted in Clair Wilcox, Public Policies Toward Business, fourth edition, Illinois, Richard D. Irwin, 1971, p.139.
2. J.S. Bain, Industrial Organization, second edition, New York, Wiley & Sons, 1968, p. 335.
3. Neil H. Jacoby, Corporate Power and Social Responsibility, New York, MacMillan, 1973, p. 195.
4. "CPI denies eyeing MacMillan takeover," The Vancouver Sun, September 4, 1976, p. 39.



